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## DOING BUSINESS IN ICELAND: INTERNATIONAL PERSPECTIVES

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Andy Bertsch, James Ondracek, M. Saeed \*  
ABM Abdullah \*\*

### Abstract

The economy of Iceland suffered greatly due to the 2008 financial crisis. The financial sector of Iceland, once an industry pillar accounting for 8% of the total GDP, literally vanished and plunged the country into its biggest recession since 1900. Straddled with huge foreign debt with little access to foreign credit, Iceland's future looked bleak in the immediate aftermath of the 2008 meltdown. Nevertheless, the people and policy makers of Iceland were set on a quick recovery. We provide an overview of the political, economic, and cultural environments of Iceland and track Iceland's progression from traditional factors of production (i.e., land, labor, and capital) to a knowledge and innovation based economy. Our analysis of Iceland includes a review of financial markets and how the country has responded to pull itself out of the recession. The Global Competitiveness Index ranks Iceland at the highest tier (i.e., Stage 3) along with measures such as business sophistication and innovation.

This study is an amalgamation and synthesis of the methodology and outline followed by past researchers including Warner-Søderholm, Bertsch, Saeed, Abdullah (2014); Saeed, M., Bertsch, A., Ondracek, J., Bates, S., Abdullah, ABM (2014); Bertsch, A., Saeed, M., Ondracek, J., Abdullah, ABM (2013); Ondracek, J., Bertsch, A., Saeed, M., Taft, C. (2012); Bertsch, A., Ondracek, J., Saeed, M., and Abdullah, ABM (2012); Bertsch, A., Ondracek, J., Saeed, M., and Abdullah, ABM (2012). This methodology and outline highlights salient issues for doing business in a specific country. Following an outline allows readers to compare and contrast the economic and business environments of various countries.

**Keywords:** *Iceland, Competitiveness Index, Knowledge, Innovation, Financial Crisis.*

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## **1.0 Introduction**

Doing business in a foreign country can bring many intercultural communication challenges. These challenges may include simply things such as the way people meet and greet each other to more complex differences in communication, business presentations, and operations of daily business tasks (Doing Business, n.d.). Iceland's \$19.5 billion dollar economy is greatly dependent on foreign trade, with all of the country's exports of goods and services. Iceland's exports make up for one third of the country's gross domestic product. This calls for many international business people to travel to the Icelandic capital of Reykjavik. Business professionals that are able to understand the culture and business etiquette can make the visit to Iceland more enjoyable and productive (Smith, n.d.). When doing business internationally, business professionals are most likely to run into language barriers, however not necessarily in Iceland. Languages spoken in Iceland include: Icelandic, English, Nordic languages, and German (Iceland, n.d.). Icelanders mainly used the English language to conduct business (Business, n.d.). English is used to conduct business; this makes the difficulties in language barriers minimal. Presentations, meetings and negotiations are well communicated between an American and Icelandic business person. The business people of Iceland are found to be direct in their speech. People are to expect this communication behavior and are not to take it offensively (Doing Business, n.d.).

A handshake is the most common form of greeting when meeting with an Icelandic business professional. Handshakes take place both during the beginning and end of meetings. As in America, good eye contact and a firm handshake are very important. Driven by western expectations, outside visitors of Iceland should dress in proper business wear. The people of Iceland take great pride and care over their appearance and it is expected that an international business traveler dress appropriately for a formal occasion when doing business in Iceland. When preparing a business trip to Iceland, preparation and scheduling of appointments is significant. Appointments should always be scheduled in advanced, which include the proposed time using the 24-hour clock. Much like in the United States, Icelandic people place great value on punctuality. If for any reason the business professional is unable to attend the meeting and/or likely be late, it is advised that they contact the respective meeting host. Arriving in advanced for any business meeting or gathering is necessary so they are in the position to participate in the meeting at the agreed start time. This also gives time for preparation to set up any presentation materials. Always ensure any of the information used is to the point and relevant when giving a presentation (Doing Business).

## **2.0 Iceland's Foreign Trade Background**

The following section of the report will discuss Iceland's foreign trade background. Included topics are a brief economic background (further discussed in Chapter 6), a historical outlay of Iceland's gross domestic product, the Heritage Foundation's ranking for Iceland's "Free Trade" capability, industries in Iceland, Iceland's exports and imports with other countries and the United States, and world organizations of which Iceland belongs (Central Intelligence Agency, 2010).

## 2.1 Economy

Iceland's Scandinavian-type social-market economy combines a capitalist structure and free-market principles with an extensive welfare system. Prior to the financial crisis Iceland faced in 2008 (which will be explained further later in this report), it was a country that had achieved high growth, low unemployment, and an astonishing steady distribution of income. Before much is introduced about Iceland's economy, it is imperative to understand Iceland is still resolving the economic problems left by its financial crisis. Iceland is slowly but surely emerging from the recession following the collapse of its main banks. The major losses of the economy are understood to have stopped by late 2010. Momentum towards a recovery was led by business investments and consumption, projecting a growth in economic activity of 3% in 2012. Inflation does appear to remain low for now (Carey, 2012).

## 2.2 Gross Domestic Product

Due to the financial crisis, Iceland's GDP fell 6.5% in 2009, and unemployment peaked at 9.4% in February, 2009 (Central Intelligence Agency, 2010). In 2010, Iceland's GDP fell 4.0%. As a direct result of these events, the government set the following economic priorities: stabilizing the krona, reducing Iceland's high budget deficit, containing inflation, restructuring the financial sector, and diversifying its economy. Also, three new banks were created as an intention to take over the assets of the failed banks (Central Intelligence Agency, 2010). Of these three new banks, two have foreign majority ownership, and the State holds the bulk of the third bank (indexmundi.com, 2012).

## 2.3 Free Trade Economy

According to The Heritage Foundation, Iceland has the 27th freest economy in the 2012 Index. Economic freedom is defined as "a condition or state of being in which individuals can act with autonomy while in pursuit of livelihood (heritage.org, 2012). In this example, a country with a score of 100 would be completely free for individual success or failure. As shown by the following graph, one can see Iceland's rebound and attempt on becoming more of a free trade economy.

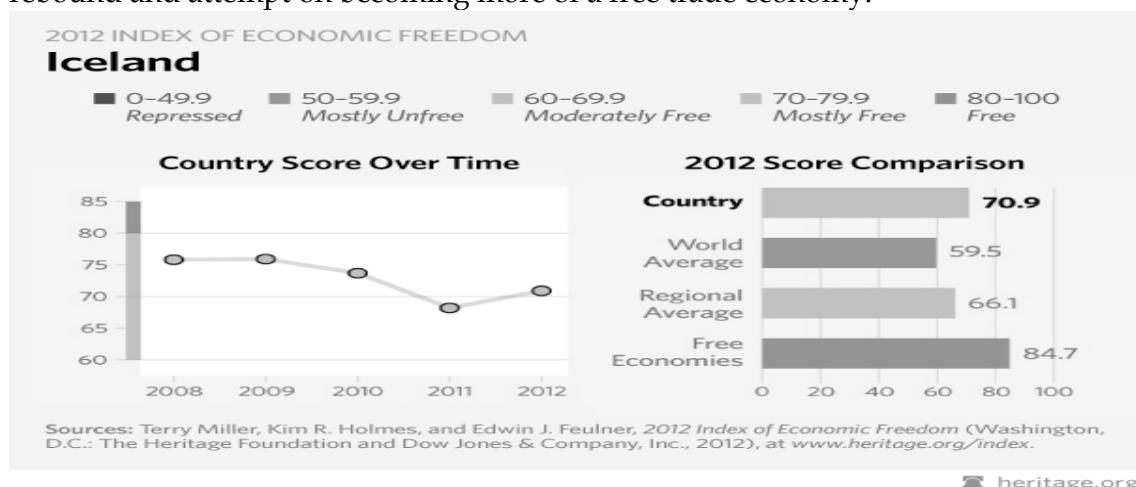


Figure 1: 2012 Index of Economic Freedom

As shown in figure 1, Iceland scored 2.7 points better in 2012 compared to 2011, mainly due to its improvements in monetary freedom and a better management of its public financials. This improvement scored Iceland the third largest increase in the 2012 Index. Heritage noted Iceland has one of the highest legal framework qualities in the world, a very well maintained rule of law, and a strong tradition of minimum tolerance for corruption.

As of 2010, Iceland had a Gross Domestic Product (GDP) of \$13,244,305,880 USD (roughly \$39,600 USD per capita). The GDP growth rate has shown declines in the years following the financial crisis and projected increases lately: GDP growth rate (2007) 3.8%; (2008) 1.3%; (2009) 6.5%; (2010) 4%; (2011 est.) 2.5%. Inflation rates have also been negatively affected by the economic breakdown: Inflation rate (2008) 18.1%; (2009) 7.5%; (2010) 5.4%; (2011 est.) 3.6%. The central government's budget is estimated at \$4.5 billion (USD) as of 2012, with an annual budget deficit of roughly \$150 million (USD). Trends in the net central government debt have shown tremendous increases since 2007: (2007) 10.3% of GDP; (2008) 41.3% of GDP; (2009) 78% of GDP; (2010) 79.7% of GDP; (2011) 85% of GDP (Iceland, 2012).

## **2.4 Industries**

Iceland's economy is greatly influenced by its fishing industry. This industry provides roughly 40% of Iceland's export earnings, more than 12% of the GDP, and employs 7% of the national work force (Central Intelligence Agency, 2010). The economy is highly correlated with the world prices of Iceland's main exports: fish and fish products, aluminum, and ferrosilicon. Over the past decade, the economy has attempted to diversify itself by entering manufacturing and software industries such as software production, biotechnology, and tourism. Much is publicized of Iceland's geothermal and hydropower energy sources, leading to substantial foreign investment in the aluminum sector. This has boosted growth in the economy and gained interest from tech firms who are seeking data centers using cheap green energy. As Iceland continues to rebound, it is expected to see more activity in these types of investments (cia.gov, 2012).

## **3.0 Political Economy**

According to Investopedia, political economy is defined as "the study and use of how economic theory and methods influences political ideology. Political economy is the interplay between economics, law and politics, and how institutions develop in different social and economic systems, such as capitalism, socialism and communism" (Political Economy, 2012). Sections included below are Government, trade, imports and exports, World Trade Organization and MFN (Most Favored Nation), and tax system.

### **3.1 Trade**

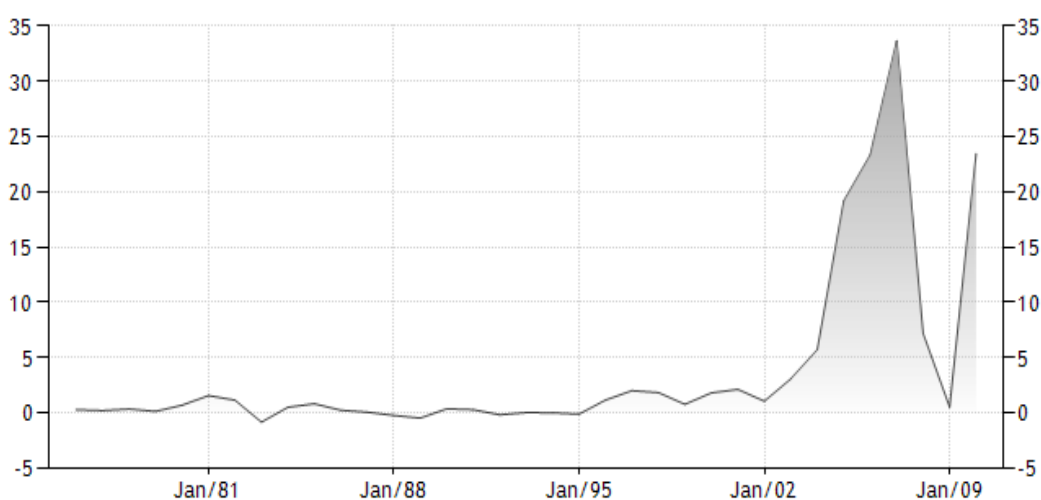
Iceland is renowned for its progressive business culture that fosters innovation and new opportunities. Despite economic hardships in the past, Iceland exhibits a healthy investment climate due to the country's sound infrastructure, well-educated workforce, and rapid recovery model (World Tax Rates, 2012).



The Trade Council of Iceland facilitates doing business in Iceland while promoting Icelandic companies in the international marketplace. Consulting and marketing services are also available in the area, along with information about exciting investment opportunities. The council has a seven member executive board, all of which are appointed by the minister of foreign affairs. Typically the board is comprised of business leaders from all sectors of the Icelandic economy. Historically, the U.S. has been one of Iceland's most important trading partners. In 2008, the exports and imports to and from Iceland and the US accounted for 8.4% and 9.3% respectively of total exports/imports. US investment in Iceland has been growing steadily and amounted in 2006 to 31.4% of total foreign investment into Iceland. An outstanding feature of the Icelandic economy is the overwhelming share of fish and fish products in its export of merchandise, which on average was close to 78% in the period 1990-1994 and as high as 90% since 1970 (OECD Economic Affairs, 2008).

### 3.2 Imports and Exports

Where exports are fairly concentrated into a few broad groups of commodities, imports are extremely diversified. Iceland is totally dependent on imports for its demand of oil and oil products, for its consumption of wheat it is totally dependent on foreign suppliers, and the timber used annually must also come from foreign sources. Also for investment goods, the Icelandic economy depends to a considerable extent on imports as most of the machinery used is of foreign origin. As a rule of a thumb, the import content of investment is around 40% in Iceland. The Netherlands, Germany, the United Kingdom, and the United States are the four major economies that Iceland trades with. In 2005, these three countries accounted for 42% of all exports and 29% of all imports. In 2006, these countries accounted for 40.6% of all exports and 30.4% of all exports. In recent years, Norway has become the main supplier of oil instead of Russia, and with it one of the main importers to Iceland (OECD Economic Affairs, 2008).



**Figure 2:** Foreign Direct Investment, Net Inflows (% of GDP) in Iceland

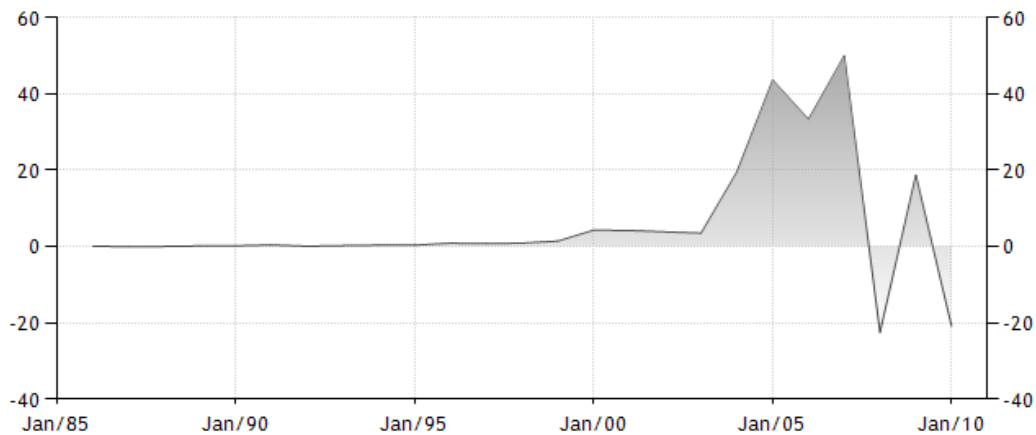


Figure 3: Foreign Direct Investment, Net Outflows (% of GDP) in Iceland

In figure 3, the foreign direct investment; net outflows (% of GDP) in Iceland was last reported at -20.91% in 2010, according to a World Bank report released in 2011. Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. Figure 3 shows net outflows of investment from the reporting economy to the rest of the world and is divided by GDP. Prior to the 2008 crisis, Iceland had achieved high growth, low unemployment, and a remarkably even distribution of income. In Figure 2, the foreign direct investment; net inflows (% of GDP) in Iceland was last reported at 23.46 in 2010, according to a World Bank report released in 2011. Figure 2 shows net inflows of investment from the reporting economy to the rest of the world (Trading Economics, 2011).

### 3.3 World Trade Organization and Most Favored Nation

In international economic relations and international politics, Most Favored Nation (MFN) is a status or level of treatment accorded by one state to another in international trade. The term means the country which is the recipient of this treatment must receive equal trade advantages as the "most favored nation" by the country granting such treatment. Iceland received MFN status from the United States on January 1 1995, which is also the day they became a member of the WTO.

#### 3.3.1 The Tax System

Iceland has systematically made its positive business environment increasingly attractive. The Icelandic tax system is simple and extremely efficient. The emphasis to keep the business environment attractive has been on simplifying it further, reducing tax rates, broadening the tax base and concluding additional double-taxation treaties. Corporate income tax rate is among the lowest within the OECD member nations. Companies based in Iceland and Icelandic branches of foreign-based companies are liable for corporate income tax on their net earnings, the national corporate tax rate is

27.9%. No local municipal corporate taxes are charged and net worth taxes on companies as well as individuals in Iceland have been abolished. Real estate taxes are paid locally by businesses, along with local service charges. Every company operating within Iceland must submit annual accounts, much like the U.S. that comply with statutory accounting rules and disclosures, and which reflect a true as well as fair view of the company's assets, liabilities, and financial position. Presentation of their financial position is modeled on standard EU requirements. Companies above a certain size that are publicly traded and have subsidiaries are required to prepare consolidated group accounts. Tax returns are submitted to local tax authorities and reviewed. Corporations registered in Iceland, whose income is mainly derived from foreign sources, can apply to keep their accounts and records in a foreign currency. Publicly traded companies are allowed to issue their share capital in a foreign currency once they have received permission to do so. Other non-publicly traded limited liability companies whose income is mainly derived from foreign sources are also allowed to issue their share capital in a foreign currency, provided that they meet certain requirements and receive permission from the tax authorities. According to the World Bank, the total tax rate for companies as a % of profits in Iceland is 27.9, compared to 68.2 for France, 46.0 for the United States, 35.4 for the United Kingdom and 57.0 for Sweden (Internal Revenue Directorate, World Bank, 2009).

Iceland imposes 3 levels of taxation of individual income other than investment income; income up to ISK 2,400,000 (approximately \$18,875 USD) is taxed at 24.1%, income from ISK 2,400,001-7,800,000 (approximately \$18,876 USD-\$61,339 USD) is taxed at 27% and income above ISK 7,800,001 (approximately \$61,340 USD) is taxed at 33%. The municipal tax on the exact same income varies between 11.24% and 13.28%, the average being right around 13.12%. Gross individual investment income exceeding ISK 100,000 (approximately \$787 USD) is taxed at 18%. As a general principle in Iceland, any individual who stays in the country for more than 183 days during any twelve-month period is considered a resident from their date of arrival. Resident individuals are fully liable for tax payments in Iceland based on their worldwide income. The tax liability ends as soon as the individual leaves Iceland. However, former domiciles remain fully tax liable in Iceland for three years after leaving the country, unless they are able to prove that they have become subject to taxation in another country. Non-resident individuals staying temporarily in Iceland for 183 days or less, and who derive income from employment during their stay, are subject to national income tax on any earned income. They are allowed the same deductions for expenses as residents. The annual personal tax credit is applied in proportion to their stay in Iceland and non-residents are also subject to municipal income tax in the same manner as permanent residents. Other non-resident individuals are subject to national income tax and municipal income tax on their income from Iceland (World Tax Rates, 2012).

The current Iceland VAT (Value Added Tax) is 26.00%. The VAT is a sales tax that applies to the purchase of most goods and services, and must be collected and

submitted by the merchant to the Iceland governmental revenue department. The Iceland VAT rate of 26%, is the highest VAT sales tax rate in the world (World Tax Rates, 2012).

#### **4.0 Financial/Global Markets**

The national currency for Iceland is the Icelandic króna. The Icelandic króna is part of the Nordic currencies which include Danish krone, Swedish krona, and Norwegian krone. According to the Iceland on the Web, the unit of currency used in Iceland is the króna which means “crown” (Iceland: Icelandic Currency, 2012). According to xe Website, as of April 3, 2012 the exchange for the Iceland króna is 126.069 to \$1.00 US dollars (xe, 2012). The following is a sketch of the country of Iceland’s financial market.

Sections included below are the Central Bank of Iceland, Expansion, Recession, and Recovery. The first section is an explanation of the Central Bank of Iceland, which explains procedures and enforcements. The Second, Expansion elucidates (explains) the factors that led Iceland to what could have been its biggest growth period of their existence. Third, Recession shows how the deregulation that led to a great expansion created a large amount of risk causing the countries and maybe the world’s worst recession. Forth, Recovery sketches the countries new policies and regulations to once again, regain control of Iceland’s banking system.

##### **4.1 Role of Central Bank**

The Central Bank of Iceland (Sedlabanki Islands as referred by Icelandic’s citizens) is the forefront for all monetary policy and financial relations. According to the Central Bank of Iceland Web site the Central Bank was established by an act of parliament in 1961. (Central Bank, April 2012) The Bank is a key player to the protection of price stability and preservation of Iceland’s economic system. There are many other tasks and duties the Central Bank is responsible for:

- One is the control of the exchange rates, Iceland compares its currency to foreign markets.
- Second is the regulation of external reserves and controlling safe and well-organized financial systems.
- Third, the payments of all notes and debt associated with other countries and internally. Controlling all debt taken on by the country.
- Regulation, is the most important duty of the central bank. In order to maintain order among its financial systems there must be regulation and control of Icelandic financial markets. The loss of this control is extremely risky and was the cause of a major recession that overtook the entire world. We will go in depth about the recession of 2008 later in this chapter (Central Bank, April 2012).

In accordance with the Central Bank of Iceland (2012), the people responsible for the organization and administration of the Central Bank are controlled by seven members. The Althingi is responsible for electing these seven members for places on the Supervisory Board. The Supervisory Board is part of the Minister of Economic Affairs. Now, the Minister of Economic Affairs elects a Governor for term periods of

five-years. The sole direction of the Central Bank is based on the actions of the Governor. Helping the Governor are Deputy Governor and many consultants, but all the risk are the Governor's. The current Central Bank Act is no. 36/2001 (Central, April 2012). Iceland made many strides to increase their financial involvement and place in the emerging countries. At the turn of the millennium Iceland's financial markets started to take a turn for the best. Banks were lending, businesses were buying, and consumers were lending. At this crucial point in time it would be important for the Central Bank to take control and steer the economy to a self-sufficient and lasting economic expansion. In return, they did the opposite. Leading Iceland and other countries into the most devastating recessions the world has seen. The deregulation of the Central Bank of Iceland started a rolling snowball, effecting countries around the world.

#### **4.2 Expansion**

The start of the new millennium (year 2000) lead to an expansion in the Iceland markets. According to Iceland Country Profile, Iceland's GDP (gross domestic product) growth percent increase from around four percent in 2000 to about seven percent in 2005 (Iceland Country Review, 2012). There are many factors that lead to the expansion of this time period. All factors leading to the expansion were profitable in the short run but would turn out to be disastrous in the long run.

One of the key contributors to the new millennium's expansion is the deregulation of the central banking industry. According to Iceland Country Review, the banking industry was completely privatized in 2003, leading to a growth in GDP of 900 percent. The privatized industry created an increase in external debt of around 700 percent of GDP by 2008, according to Emerging Markets Monitor (Emerging Markets Monitor, 2008) This onset of free banking gave banks the freedom of lend to any and every person of interest. Loans were being handed out to people that could not repay them and according to Charles Ferguson banks were leveraging close to 33:1 ratio of their own assets. The leveraging ratio means the banks are lending out 33 times the amount of assets the bank owns (Ferguson, 2012). More and more credit was being issued in pure faith that the borrower was going to be able to repay the principle. Lenders started to realize the onset of borrowers being unable to repay their principle, and then started to take out insurance against their borrowers. This was all in good nature and part of a daily financial decision. A problem with the system of the insurance is multiple investors were able to take out insurance against these loans. Investors that had no stake in the loan at all. In simple terms it is like someone insuring their neighbor's house. If the neighbor has a fire, the fire does not affect the person, but you can claim a loss on their property. According to Ferguson these risky insurance policies, known as Credit Default Swaps were due to the lack of regulation in the banking and insurance industry (Ferguson, 2010).

Even worse, the Credit Default Swaps were being sold to investment companies and mixed into mutual funds. The same mutual funds were then rated by rating industries as being safe and giving high returns. The idea of invisible money started to expand rapidly across Iceland and the world in general. According to Emerging

Markets Monitors it was the greatest borrowing binges of all time (Emerging Markets Monitor, 2008). The expansion affected everyone worldwide giving them huge profits that came for the investment of this invisible money.

#### **4.3 Recession**

External involvement of Iceland's banks stretched into other countries. According to Charles Ferguson and his movie "Inside Job" Iceland's three major banks; Islands bank in, Kaupping, Giltneir borrowed more than \$120 Billion Dollars throughout the expansion (Ferguson, 2010). This figure is 10 times the size of Iceland's economy, and was the main reason for Iceland's large economic growth at the turn of the millennium. In addition to the large economic growth, there came a large economic decline. According to Iceland country profile, in 2008 great recession that would drown Iceland and bring an abrupt stop to the high standard of living that the country has enjoyed (Iceland Country Review, 2011). The oncoming crises would collapse Iceland's economy, leaving Iceland with increasing prices and consumer spending, while the inflow of income for many individuals was decreasing or even cut off completely. According to Ferguson, unemployment tripled in a 6 month period (Ferguson, 2010). The unemployment was one of the great impacts of the depression.

Iceland began to experience corruption in the form of payouts to economists. According to Ferguson, Fredric Mishkin was paid \$124,000 dollars by the Icelandic Chamber of Commerce. These payouts lowered risk factors for Iceland banks to take on external debt driving their leverage ratio even higher. Icelandic citizens put trust into the Iceland's banks and expected a continued growth in their investments. Unaware of the risk that was involved in their investments many citizens were in shock to see the substantial drop in the economy. Well educated men were being paid off to give Iceland great reviews. (Ferguson, 2010). The Economy of Iceland was like a rolling snowball that could not stop. According to Ferguson inflation was on the rise and the country was expanding at an uncontrollable rate (Ferguson, 2010). Once the recession hit prices were still high and rising to meet public demand. People were spending. Interest rates were increasing. Iceland had hit a recession and would need a steady controlled recovery process to become a player in the world market again.

#### **4.4 Recovery**

The Icelandic Government would set in motion many key policies that would put the country back on the track of recovery. According to Iceland Country Review, after a meeting of key European States that included United Kingdom, France, Germany, Italy and Iceland would not receive any help from its external counterparts (Iceland Country Review, 2011). Left on its own to recover Icelandic government would initiate regulation and control of its financial systems.

One of the policies is control of the CPI (consumer price index) keeping it at a steady growth rate. According to OECD Economic Surveys: Iceland, Iceland's central bank focuses to keep CPI changes within 2 ½ percent for any 12 month period (OECD Economic surveys: Iceland, 2011). The Central Bank can now regulated the control of the inflation keeping the country within a manageable recovery process. According to

Economic Overview the regulation would also prevent large leveraging by banks, and increasing standards held on which customers were able to receive loans (Iceland Country Review, 2011). Keeping investments secure for the banks customers and Icelandic citizens. Gaining back economic control of Iceland would be a slow process.

## **5.0 Conclusion**

When doing business in any place, specifically a foreign country, there can be many strengths and weaknesses. Iceland has an abundance of strengths that can help it recover from the occurring deficit. Iceland has always had a substantial amount of tourism, despite the setback of a volcanic eruption of Eyjafjöll. According to Europa World, in 2008 there was a total of \$881 million U.S. dollars in revenue due to tourism. Hotels alone profited around 1.6 million in 2010 (Europa World: Tourism, 2012). Iceland also has an abundant amount of geo-thermal, renewable energy sources and hydroelectric resources (global EDGE, 2012). Another strength Iceland has according to global EDGE is a favorable geostrategic position. The Dictionary of Farlex states that geostrategic is "the geopolitical and strategic factors that together characterize a certain geographic area" (The free dictionary, 2009). This also means that Iceland has a geographical benefit for military planning. Global EDGE also states other strengths such as a political consensus on restoring equilibrium, trade surplus, and a good population structure and education level (global EDGE, 2012).

Iceland has been suffering from a major deficit that in return gives it some weaknesses. According to global EDGE, Iceland has 7 weaknesses that are main factors to why doing business in Iceland could be risky. Iceland has a high foreign debt, which means Iceland spends more money than it actually has. The bailout following debt has caused the financial system to be unstable and the Icelandic krona is also unstable despite the control on exchange. Financing, such as giving out loans to prospective business, has also become hard because of capital controls due to the debt. Another weakness is the small size of the economy. Lastly, Iceland is very dependent on aluminum and sea exports. Iceland's economy depends heavily on the fishing industry (global EDGE, 2012).

## **Major Risks**

When doing business, there are always risks involved. According to global EDGE, Iceland is considered an A1 business rating in risk (global EDGE, 2012). The expectancy of the economy in Iceland is predicted to improve within the next few years. Despite the financial situation in Iceland since 2008, the debt crisis has turned for the better and has shown to have some improvements. Inflation has dropped 2.5% which will help improve living costs with mortgage loans (global EDGE, 2012). The foreign investment in manufacturing has also sparked the Icelandic economy. Although there are several signs of recovery, there are also a few things that could jeopardize the economy of Iceland. One major factor is the Supreme Court decision made in 2010 making it more difficult to receive foreign loans. Although this ruling benefits household mortgages, it impacts the banks in Iceland. The second factor involved Iceland's request for certain repayment of loan agreements being declined. According to globalEDGE, this factor has several consequences such as continuations

in: (1) agreement with the IMF, (2) Iceland and the world capital markets, (3) negotiations with the European Union (global EDGE, 2012).

Doing business anywhere is always a big risk to the investor. If the economy continues to increase in Iceland, the strengths may greatly overcome the weaknesses, making a business venture in Iceland a great opportunity.

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## ANALYSIS AND STUDY ON QUALITY OF WORK LIFE IN PRIVATE SECTOR BANKS IN HARYANA STATE

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### Abstract

World has become global Village, People interact with each other from different regions during different period of time. Quality of work life is reviewed as that umbrella under which employees feel fully satisfied with the working environment and extend their wholehearted cooperation to the Organization. This paper is aimed at the theme of work life Balance and to explain the significance of the said subject. QWL is playing a vital role in achieving the goals of the Organization in every sector whether in Service, Banking, Manufacturing, and Tourism Sectors. High QWL can give a result in better Organizational performance, effectiveness, innovations, etc. QWL is a generic phrase that covers the feeling of workers in about every dimensions of work including security, economic rewards, working conditions, Benefits and interpersonal relationship. This paper mainly focuses on Private Sector banks and their working environment. It is a successful key of any organization to improve the employees work life quality in the banking sector.

**Keywords:** *Quality of Work life, Banking sector, Organization, QWL, Tourism Sectors.*

### Introduction

Organizations have various goals and objectives which are attained through employee's efficiency. So, human resources play a very important role in the success of an organization and to get the maximum or sufficient use of the human resources an organization need quality of work life (QWL). The term 'Quality of Work Life' has appeared in research Journal and press in USA only in 1970's. Louis Davis introduced the term "Quality of Work Life". The first international QWL conference was held in Toronto in 1972. The international council for Quality of Work life was established in 1972. From 1980 onwards QWL was increasingly made past of employer- centered productive programme. QWL is a philosophy, set of examples or rules, which considered that

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human resources of an organization are the assets and most important resources. QWL based on Labour-management relationship which facilitates active involvement in group working arrangement or mutual benefits to both employer and employees. Economic growth and development of the country depends on Banking Systems. Banking System industry has attained the highest position in the world. The concept of Banking in India dates back to the first half of 18th century. The first bank that was established in India was 'The General Bank of India' founded in 1786. After that came State Bank of India in Kolkata in 1806, this was then known as the Bank of Bengal. The operations of all the banks in India are controlled by Reserve Bank of India. In 1935 RBI took over the responsibility formally regulating the Indian Banks. RBI is the Central Bank of India. All the banks in India are followed the cost determined by revenue minus profit models. This means that all the resources should be used efficiently to improve the productivity. And to ensure win-win situation an organization need QWL. The Quality of Work life of its employees plays an important role as the success of the banking industry is highly dependent on its employees. The employees in banking sector are experiencing heavy work load, lack of authority to control, resources, absence of autonomy in decision making, etc. which results work life imbalances causing stress effecting the mental and physical wellbeing of employees. The aim of this study was to identify the quality work life of Bank employees due to high level of work pressure, working employee's issues, professional career development, stress, health issues. It thus refers to the quality of relationship between employees and total work environment.

### **Review of Literature**

Quality of work life has always been up in studying organization behavior. The first paper presentation by Davis in 1972 at Arden House US and thereafter, there was a greater pressure on Quality of Work Life for enhancing their motivation and willingness towards work. Suttle (1976) defines quality of work life as the degree to which members of a work organization are able to satisfy important personal needs through their experiences in the organization. In the words of Kumar and Tripathi (1993), Quality of Work Life is a philosophy of management that believes cooperative relationship between employees and managers and also believes that every employee has the ability and right to offer his intelligence and useful inputs into decisions at various levels in the organizations.

Karrir (1999) examined the quality of work life of 491 managers from various sectors of industry, public, private and cooperative which indicated that top-level managers had higher quality of work-life. A comparison of quality of the quality of work-life of managers in three sectors of industry with respect to size of organization revealed that managers from small and large size public sector organizations had better quality of work-life as compared to their counterparts in private and cooperative sectors. Dr T.G. Vijaya, R. Hemamalini (2012), in their article titled, "Impact of Work Life Balance on Organizational Commitment among Bank Employees", the researcher found that there exist a positive correlation between affective commitment, continuance commitment and work life balance variables.

### **Need of the Study**

The quality of work life refers to the favorableness or un-favorableness of a job environment. It describes a person's or group's standard of living environment, public health safety that affects their wellbeing such as Salary and Benefits. The changing needs of employees, their culture values and work environment give birth to new systems of human resource management. One such new sub system is quality of work life. It is a successful key of any organization to improve the employees work life quality in the banking sector.

### **Statement of the Problem**

The banking sector has undergone a structural change over the past two decades, which could be observed in the role and responsibilities of bank employees with heavy work load and stress. Bank employees have been facing the maximum work pressure in the process of delivering timely services to meet organizational goals and customer's satisfaction. Banking is essentially a high contact services industry and there is a close interaction between service provider and customers. With the increased use of equipment and technologies on-line banking transactions increased banking habits of customers, RBI guidelines and government control on policies and so on compound the problem of work stress of employees causing declined quality of work life.

### **Hypothesis**

Keeping in view the objectives set for study, the following Null Hypothesis ( $H_0$ ) is formulated:

There is no significant difference between employee perceptions of quality of work life and the category of banking sector to which the employee belongs.

### **Research Methodology**

The study is based on both Primary and Secondary data. The primary data have been collected from the employees of private sector commercial Banks in Haryana State with the help of questionnaires. Quantitative data collection technique was used with Closed Ended Questionnaire, which first tested to check the reliability of the data. The collected data was analysed for the purpose of the current study. Leighton Cosseboom (5 September 2014). "Asia is dominating the m-Commerce market, puts US and Europe to shame". Tech in Asia. Retrieved 9th September 2014.

Survey technique was selected to acquire data within given span of time. The complete lists of banks in Haryana with the details of IFSC Code, MICR Code, number of banks, etc.

- **Sample Design :** In this particular study multistage sampling has been used in which various stage used. It is possible to collect the data from employees of all the branches in Haryana district. Private sector banks comprise of HDFC Bank, ICICI Bank, YES Bank, questionnaire were distributed and collected personally by the researcher to conclude the study.
- **Plan of Analysis:** To analyse the influence of Job Satisfaction on quality of work life of employees, get the data of highly satisfied and dissatisfied or Agree and Disagree employees which are directly related to job satisfaction.

- **Questionnaire Design:** The questionnaire is so framed with an intention to elicit information from the private sector bank employees. Primary data were collected through questionnaire survey.

- **Questionnaire**

[A] Demographic Profile ✓

1. Age in complete years.....
2. Gender:
  - (a) Male
  - (b) Female
3. Marital status:
  - (a) Married
  - (b) Single
4. Number of children:
  - (a) One
  - (b) Two
  - (c) More than two
5. Number of boys: ..... Number of girls: .....
6. Ages of children .....
7. Number of dependents in family: .....
8. Family Type
  - (a) Nuclear
  - (b) Joint family
9. Designation
  - (a) Relationship Manager
  - (b) Cash Collector
  - (c) Branch Manager
10. Total years of work experience Academics Corporate.....
11. Spouse working
  - (a) Yes
  - (b) No
12. Spouse is in teaching profession?
  - (a) Yes
  - (b) No
13. Office timings from to .....?
14. Per-day hours (institution and home) spend on preparing lecture, research work, etc.
  - (a) 7 to 8 Hours
  - (b) 8 to 10 Hours
  - (c) 10 to 12 Hours
  - (d) More than 12 Hours

15. Hours spent on travelling to work (both-way):
  - (a) Less than 30 minutes
  - (b) Nearly One hour
  - (c) Nearly One & Half hour
  - (d) Nearly Two hours
16. Do you suffer from any stress-related disease?
  - (a) Hypertension
  - (b) Obesity
  - (c) Diabetes
  - (d) frequent headaches
17. Do you take up consultancy work?
  - (a) Yes
  - (b) No.
18. How many hours in a week do you spend in consultancy? .....
19. Do you have get together functions for faculty members?
  - (a) Yes
  - (b) No
20. Are family members also invited in such gatherings?
  - (a) Yes
  - (b) No
21. Do you do any of these activities at home? (Use Comma)
  - (a) Bathing kids
  - (b) Cleaning/ dusting
  - (c) Cooking
  - (d) Buying grocery
  - (e) Teaching kids
22. How often do you do the above mentioned activities?
  - (a) Once a week
  - (b) Twice a week
  - (c) Never
  - (d) Thrice a week
  - (e) daily
23. Who takes care of your children when you are at work?
  - (a) Spouse
  - (b) Mother/Father
  - (c) Mother/Father-in-law
  - (d) Maid
  - (e) Day care centre
24. *Are you in Private Institution or Government Institution... ..?*

[B] Please indicate your level of disagreement and agreement on the following statements:✓

| S.No. / Questions.                                                                                      | Strongly Disagree | Disagree | Agree To Some Extent | Agree | Strongly Agree |
|---------------------------------------------------------------------------------------------------------|-------------------|----------|----------------------|-------|----------------|
| 1 The demand of my work interfere with my home and family life                                          |                   |          |                      |       |                |
| 2 The amount of time my job takes my job takes up makes it difficult to fulfil family responsibilities. |                   |          |                      |       |                |
| 3 Things I want to do at home do not get done because of the demands my job puts on me.                 |                   |          |                      |       |                |
| 4 Due to work-related duties, I have to make changes to my plans for family activities                  |                   |          |                      |       |                |

[C] Please indicate your level of dissatisfaction and satisfaction in the following areas:✓

| Descriptions         | Highly Dissatisfied | Dissatisfied | Satisfied to Some Extent | Satisfied | Highly Satisfied |
|----------------------|---------------------|--------------|--------------------------|-----------|------------------|
| Job Satisfaction     |                     |              |                          |           |                  |
| Career Satisfaction  |                     |              |                          |           |                  |
| Spirituality         |                     |              |                          |           |                  |
| Health               |                     |              |                          |           |                  |
| Life satisfaction    |                     |              |                          |           |                  |
| Relation with spouse |                     |              |                          |           |                  |
| Performance          |                     |              |                          |           |                  |

## Conclusion

In a service industry like Banking, the quality of human resources assumes vital importance. Bank customers would normally join with a bank whose staff is well informed and well imposed. Banks were evergreen attraction to the job seekers in the recent past mainly because of the pay and employee benefits provided by the banking industry. Recently, banking sector employees were facing the problem regarding QWL, which we will try to improve for the better work life quality to increase their productivity and job satisfaction.

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## STRATEGIC ANALYSIS OF TOURISM INDUSTRY IN HARYANA : AN OVERVIEW

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### Abstract

Haryana Tourism Corporation is a Haryana Government undertaking, having hotels, resorts and restaurants throughout the state and its Head Office is situated at Chandigarh. Despite operating in the economically sound and feasible area, it has limited target market and low share in tourism as compare to other States. So, it is essential to enlarge its area of operations. Implementation of technology solutions involves huge capital out lay and extensive planning. One of the problems of service sector is heterogeneity in the personalities of the dealing hands. Government approach towards service sector especially regarding tourism in Haryana is not satisfactory as compared to other sub-sectors, which has to be reconsidered. So it is essential for Government to pay special attention in such area. Thus, this study is going to explore different forms and positioning of tourism products in Haryana. Several innovative steps proposed to be taken. A field based systematic survey was carried out at selected tourism spots in the study area. The present study examines the infrastructure and tourism resources available in Haryana and challenges faced by tourism industry of Haryana. The data used are primary and secondary in nature. The result of the study brings feasible suggestions and recommendations for further development of tourism in this region

**Keywords:** *Strategic Analysis, Industry Structure, Five Forces, Tourism, Infrastructure.*

### Introduction

There are different sub sectors of service industry such as banking, Insurance, education, health etc. Among different sub sectors of service industry, tourism holds a major share. Tourism has now achieved tremendous preposition for its multi-dimensional advantages as for the steadily improving pace of growth. Tourism,

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basically, is an infrastructure based service product. The nature of services marketed is highly intangible. It is here that systematic marketing holds the key to bring back the guest as a friend as also in getting the best out of the existing tourism resource. Effective marketing of tourism needs constant gearing up of the infrastructure to international standards and presupposes its coordination with the tourism suppliers. In strategic terms, it calls for the adoption of an integrated approach to management and marketing tourism. And, in operational terms, it means the implementation of a better-defined, better-targeted market driven strategy for realising the planned societal goals as well as that of suppliers organisation.

In recent years, tourism has been increasingly recognised for its potential to contribute to the reduction of poverty. Its geographical expansion and labour intensive nature support a spread of employment and can be particularly relevant in remote and rural areas. United nation world tourism organisation statistics show the growing strength of the tourism industry for developing countries. International tourism receipts for developing countries (low income, lower and upper middle income countries) amounted to US\$ 203 billion in the year 2005. Tourism is one of the major export sectors of developing countries, and is the primary source of foreign exchange earning in 46 of the 49 least developed countries. In Indian context, the strength of tourism industry is its ancient and yet lively civilization that gave rise to four of the world's greatest religions and philosophies and instituted the glorious traditions of travelling in the form of pilgrimages, which continues to flourish in all its pristine fabric. The interplay of climate and topographical extremes through the ages has resulted into remarkable diversity in art, craft, traditional languages, settlement patterns, customs, costumes, and other cultural aspects, in the country thereby creating synergic environment everywhere. Tourism is a short term temporary movement of people from one place to another place far away from where they work and residence, for leisure pleasure, recreation and business purposes etc. as primary purpose. The tourist will not involve in any remunerative activity at the destination. It is the natural phenomenon the host and guest will come interact with each other at the destination, which will influence mainly on host culture. At present tourism has become an area of social science analyses. Tourism is a multidisciplinary and now become complex phenomena, which has been investigated from a various perspectives of social science, including sociology. The sociological literature is mainly concerned with the range of different areas which have been approached mainly from applied customs, traditions, faith, ceremonies and way of living of a culture at a destination in the form social science. These are also concerned with the social roles of tourist, tourist impact on society, tourist behaviour, and factors affects the society norms, beliefs, thoughts and traditions etc. at the destination. Tourism has become an important segment of change at world level in cultural and economic scenario; because of its extensive global influence and stable expansion. No doubt, tourism occupies main focus in social science research and studies in developed as well as developing nations at present time. Tourism itself is, of course, not a new

phenomenon and has long been studied by economic and marketing scholars. The study of tourism impacts on social trends arise in these disciplines because tourism has been seen as one of the basic element of change at tourism destinations, so sociological study of tourism impacts is significant in itself. Tourism has developed as a complex and multidisciplinary phenomena which should be studied from a variety of social science perspectives, including sociology, psychology, anthropology, history, geography etc.

### **Haryana Tourism**

Tourism promotes national integration and international understanding. It encourages preservation of monuments, heritage properties and eco-sanctuaries, helps survival of traditional art forms, crafts and culture. It has achieved rapid strides due to its capacity to earn foreign exchange, generate employment opportunities and inculcate a sense of love and fraternity in the minds of people. Today, tourism is not just seen as an activity of visiting tourist spots, clicking a few photographs and preserving them for posterity. Instead, it is expected to play a larger role in the development of mankind. The stated objective of the nation is to distribute the benefits of Tourism more widely, contribute to poverty reduction, sustainable development and gender equity and minimize adverse social impacts.

Over the years tourism has emerged as a major segment of Indian economy and state economy. Since imports of goods needed for tourism are limited, value added component interns of foreign exchange earning of this industry is relatively high. Domestic tourism, too, plays an important role in integration of people, employment generation and economic development of the country and state. Haryana tourism is known throughout the country for trail blazing performance. Haryana also offers excellent investment opportunities in tourism sector. Tourism department has identified a number of new sites for creation of tourism spot. It has been decided that new projects may be taken in joint ventures/ collaborations with private sectors. The joint venture will be entered in the areas of setting up hotels, motels, health resort and beauty parlors, amusement parks including water rides, multiplex complexes, golf courses, shopping arcades.

Haryana has a network of 44 tourist complexes, which are, incidentally, named after birds. These have been set up along the national or state highways, and at districts, towns and places around Delhi. Some of the tourist complexes in Haryana are *Badhkal Lake*, *Dabchik*, *Jungle Babbler*, *Karna Lake*, *Kala teetar*, *Kingfisher*, *Parakeet*, *Magpie*, *Hotel Rajhans*, *Skylark*, *Sohna*, *Surajkund* and *Yadvindra Gardens* at Pinjore. The immensely popular *Surajkund Crafts Mela* is held in every year, in the month of February, to promote Indian arts and handicrafts. The '*Mango Festival*' and the '*Kuruksheetra Festival*' are the other much – awaited events.

### **Review of Literature**

Haryana was the outermost location of the ancient Indus Valley Civilization .According to PranNath Chopra, Haryana got its name from Abhirayana – Ahirayan-Hirayana-Haryana. Haryana is a rich state in means of agriculture about 70% of residents are engaged with agriculture. As an industrial development state it has also

shown the potential on India's map. India's largest automobile company Maruti manufacturing plant is in Gurgaon. The headquarter of DLF limited India's largest real estate company is in Gurgaon. Today Haryana is also raised with the different colors of tourism. Haryana Tourism has brought the most prominent changes in tourism industry. The paper is an attempt to highlight the different innovations of Haryana tourism and it is focusing on the promising future growth of tourism in the said state (Anukrati Sharma, 2012).

There are so many destinations in Haryana which are popular for different types of tourism such as MICE Tourism, Farm Tourism, Religious Tourism, Cultural Tourism etc.. Moreover Haryana is also famous for its rich tradition and culture but in spite of all these we are lacking behind if compare it with other states such as Rajasthan, Uttarakhand in terms of inbound tourist traffic. There are so many reasons behind it but the most important factor is involvement of Government and its policy implementation. No destination can achieve its peak point without the involvement of Government. It is the government which takes initiative in infrastructure and superstructure development. Government endeavors to encourage the development of souvenir industry linked to local crafts, events and places which would promote a distinctive image of the State both within and without the State. Therefore Government is a key player in the development and planning of any destination. The research paper aims at evaluating the role of government in the development and planning of destination in Haryana so that marketing strategies can be adopted in further implementation of any kind of policy by the government (Mohan Kumar, 2013).

Tourism is one of the biggest and fastest-growing economic sectors in the global economy and has significant environmental, cultural, social, and economic effects, both positive and negative. Pilgrimage tourism is one of the pre-requisites of achieving sustainable development which can be taken as a remedy to manage tourism effects. This paper focuses on the sustainable development of pilgrimage tourism in Kurukshetra situated in the state of Haryana. Kurukshetra has been an emerging tourist spot due to its magnificently diverse religious tourist potential and rich cultural heritage. The main objectives of the study are the formation of tourist areas, to highlight the factors creating hindrances in sustainable tourism development and suggest suitable measures for sustainable development of pilgrimage tourism in Kurukshetra. A field based systematic survey was carried out at selected tourism spots in the study area. The result of the study brings feasible suggestions and recommendations for further development of tourism in this region (Ravi Bhushan and Lakhvinder, 2014). There is only one good example in the past when a state of India took the initiative to create, virtually out of nothing, a tourism Industry. This was the Haryana in 1970s, which led an imaginative drive to transform the state into a place attractive for tourists.

Haryana which pioneered the concept of Highway tourism in the country now hold several feathers of Golf, Eco, Farm, MICE and Medical tourism in its cap of tourism. This paper focuses on the different innovative ideas taken by the state of

Haryana for developing and improving tourism products. Thus, this paper is going to explore different forms and positioning of tourism products in Haryana along with Tourism Policy 2008 in which several innovative steps were proposed to be taken (Pardeep Kumar and Pardeep Singh, 2015)

### **Objectives of Research**

As reflected from the title itself the core objectives of the study is to examine the present trends and challenges in marketing of services with special reference to tourism by critically evaluating the existing scenario keeping in view the various aspects of service sector, objectives of research are:

- To prepare an extensive inventory of service sector so as to analyse the nature and set up of service organisations with special reference to Haryana Tourism Corporation.
- To access the potentials for marketing in service sector in the study area with special reference to tourism.
- To study the existing trends in marketing of services.
- To analyse the marketing and business strategies for service sector.
- To examine the quality of services provided by the public and private organisation engaged in this business in the study area.
- To analyse efforts made for promotion of tourism traffic in the study area through cultural shows, dance, music, film shows, sports and games etc.
- To study the strategy opted by Haryana Tourism Corporation for management and control of tourist complexes and attractions.
- To study problems and challenges faced by Haryana Tourism Corporation in marketing of services.
- To analyse the efforts of Government in promotion of service sector.
- To identify the untouched potential of Haryana Tourism

### **Research Methodology**

The research design will be based on field surveys, designing questionnaires for different organisations. The proposed study will involve collection of data from primary and secondary sources. Primary data will be collected through well-designed structured questionnaire, observations and personal interaction methods. For the collection of primary data, public and private concerns like Haryana Tourism Corporation, LIC etc. of service sector specifically related with tourism industry will be visited and questioned. The secondary data will be collected from government agencies and offices like Department of Tourism (DOT), Department of Telecommunication, Haryana Tourism Corporation, TFCI and FICCI. Various universities, state libraries, magazines, newspapers, Internet websites will also be referred. For analysing the collected data from primary survey appropriate statistical tools used as per requirement. The basic aim of the present study is to examine the present status of Haryana tourism and future scope of it. The nature of the present research work is explorative. To fulfill the objective carefully both primary and secondary techniques of data collection has been used. To collect the information

regarding the present status of tourism in Haryana secondary data from various sources (i.e Profile of Haryana tourism dept., Economic Survey of Haryana, Journals published and unpublished Research papers and articles) has been collected. Furthermore to investigate the scope of how Haryana can be improved, a primary data has been organized.

For collecting primary data, a schedule is proposed using a questionnaire with items was given to experts and professional from academic and industrial after minor modification in same, final questionnaire prepaid as shown in figure 1. A set of close ended questionnaire has been prepared and pre tested before final survey for interviewing the selected samples. Tourist centers has been selected on the personal observation of researcher from each selected district in Haryana. The basic purpose of selecting the different categories of respondent was to understand the research scope. The study mainly forecasted on present status of Haryana tourism, its scope in future, and how to improve a better future of Haryana tourism Total 1200 samples has been selected on random basis however 1500 samples have been interviewed.

### Findings and Suggestions

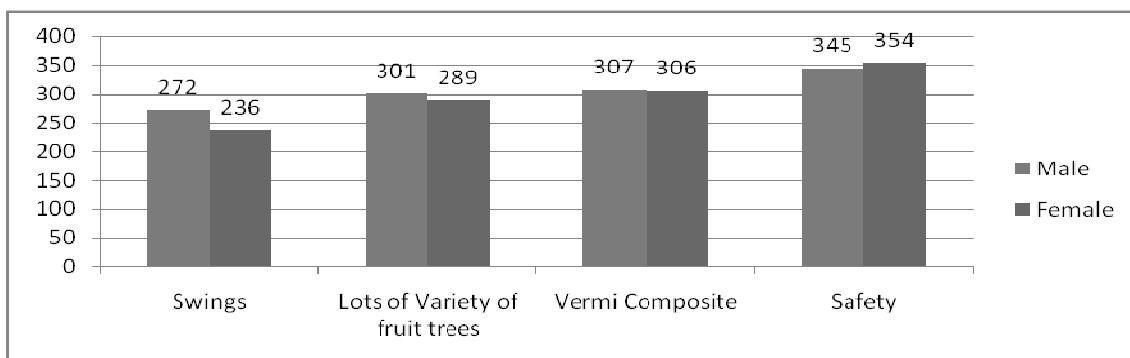
From safety point of view attention is given for establishment of police outposts. Public sector alone can't contribute for whole development, that is why Government is providing different incentives for attracting private investments. Nobody can deny the contribution of Haryana Tourism Corporation in the field of development of tourism related services. The efforts of Haryana Tourism Corporation in the field of promotion of highway tourism, cultural and heritage tourism, adventure tourism and golf tourism is appreciable. The contribution of Haryana Tourism Corporation for promotion of cultural festivals and art and craft of the state can't be refused. But even it leaves some space with regard to which suggestions can be provided.

#### Safety Activity

(Male & Female)

#### Average and Poor

| Questions                      | Male | Per      | Female | Per      |
|--------------------------------|------|----------|--------|----------|
| Swings                         | 272  | 45.33333 | 236    | 39.33333 |
| Lots of Variety of fruit trees | 301  | 50.16667 | 289    | 48.16667 |
| Vermi Composite                | 307  | 51.16667 | 306    | 51       |
| Safety                         | 345  | 57.5     | 354    | 59       |



Haryana Tourism Corporation is providing tourist facilities at district and sub-divisional headquarters to cater the needs of local people. Many important fairs and festivals are to be organised by Haryana Tourism Corporation such as Suraj Kund Mela and other district level fairs so as to attract tourists. The tourist potential of Morni hills is being exploited for adventure and activity based tourism with an eco-friendly slant. The government has drawn up plans for promotion of Kurukshetra as important pilgrim centre. Haryana Tourism Corporation is contributing in field of wild life tourism. Haryana tourism has traditionally used bird life as its theme. But the draw of Haryana wild life is not strong enough to warrant incremental investments. Haryana Tourism Corporation is promoting Highway Tourism by building tourist complexes at strategic point passing through the state. Much contribution can be seen from side of Haryana Tourism Corporation for exploiting the popularity of Suraj Kund Mela and publicising local fairs and festivals.

#### **Suggestions**

- Security and safety is major concern of travelers. For safety, it is suggested that Tourism Police outposts must be set up in the proposed "Tourist Centres" in Chandigarh, Faridabad, Gurgaon and Kurukshetra.
- The two areas, where tourists feel insecure in terms of being cheated are shops and transportation. For removal of this sense of insecurity, it is suggested that shops must be in the form of accrediting shops that have price tagged items and a reasonable refund policy. Shops will carry a Haryana Tourism plaque and be advertised in an official map. Taxis and rickshaws must be metered and carry traffic cards. These will be identified with a plaque.
- The policy makers should spend the resources on overall rather they should plan development of selected segment or spot, which will bring maximum benefits.

#### **Conclusion**

From the whole discussion it is concluded that service sector is contributing a good share in development of our economy. Tourism sector, which is the important segment of service sector, is also showing its good stand. Haryana tourism is known throughout the country for its trial blazing performance. Haryana Tourism Corporation is making efforts for development of tourism related activities. Haryana Tourism Corporation is providing more attention on promotion of Highway Tourism. In addition of that efforts are also made by Haryana Tourism Corporation for promotion of village tourism and Golf tourism. So many fairs and festivals are also organised by Haryana Tourism Corporation for providing more importance to our art, craft and culture. For that, contribution of Haryana Tourism Corporation can be seen in the form of its efforts for promotion and publicising of these fairs and festivals. Because public sector alone cannot contribute for development of tourism sector, now Government is also providing incentives to private sector for encouraging their contribution to tourism.

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## REDUCING RISK IN BUSINESS THROUGH CHANNEL FINANCING

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Dr. Richa Singhal\*

### Abstract

Channel Financing (CF) is relatively a new phenomenon, emerging process in the Indian business scenario, importance of which has been recognized by a few companies such as Lafarge, ACC, and Asian Paints etc. These days, companies in India have looked at ways like Manufacturing Resources Planning (MRP-II), Enterprises Resource Planning (ERP), Logistics Resource Management (LRM) and Supply Chain Management (SCM) of cutting costs, reducing their asset base and improving process efficiencies in their quest to become globally competitive through taking initiatives like Channel Financing. Channel Financing in India seems to be following the path of more advanced industrial nations, involving not only customers, manufacturers and vendors but also third party service providers, consultants, software providers etc.

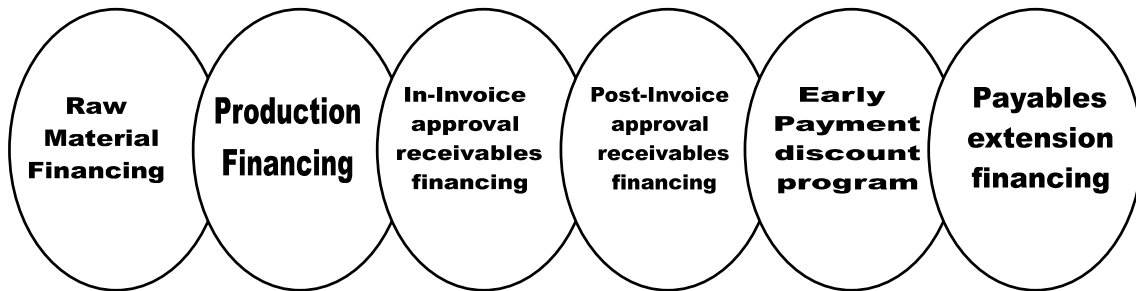
**Keywords:** CF, LRM, ACC, SCM, MRP-II, ERP, Supply Chain, Financing Triggers.

### Introduction

“Channel Financing is about structuring commercial and financially integrated solutions, and managing risk and serving relationships that are defined by the commercial and financial flows across the supplier and distribution local and international chains” (Haddad, 2006). Channel Financing or financial supply chain describes the activities involved in planning and executing payment between trading partners through various financial instruments including exchange rates and credit and country risks. It involves cash flow, working capital and corporate risk management. Channel Financing is the process of exchanging payments, related documents and information between buyers, sellers, financial institutions and other involved parties. It is a combination of trade financing provided by a financial institution, a third party vendor, or a corporation itself, and a technology platform that united trading partners and financial institutions.

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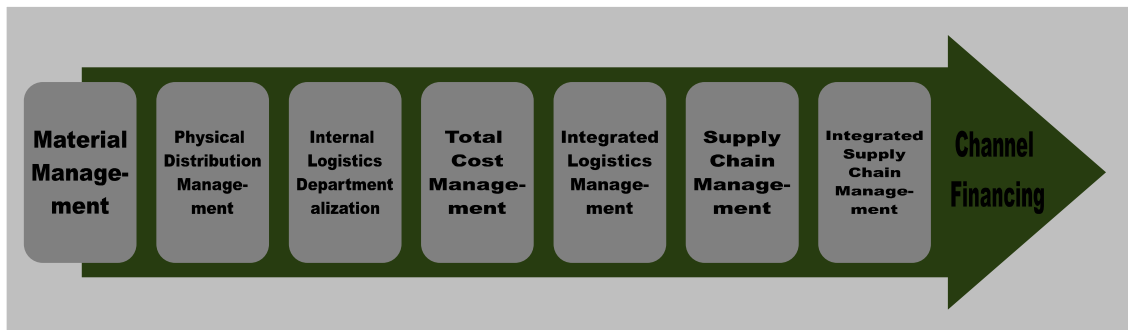


Electronically and provides the financing triggers based on the occurrence of one or several supply chain events.

Channel Financing aims to provide companies with more control over their financial processes and more option on how to use cash and credit. By leveraging better visibility and control over supply chain transactions Today's channel financing options also enable financing to be done at many more points in the supply chain-raw material, intermediate production, points of transactions, customs clearance, arrival at vendor managed inventory hub etc.

#### Evolution of Channel Financing

The philosophy of Channel Financing has evolved in phases with changes in business environment and changing requirements of customers. Following figure captures the various phases:



#### Characteristic of Channel Financing

- It is web based fully integrated system which provides corporate broadcast and active messaging functionalities to pro-actively notify individuals of conditions that required their attention.
- It is rules based.
- It supports the exchange of "real-time" information through trading communities, such as employees, customers, suppliers, distributors and manufacturers.
- It has open internet application architecture which allows for rapid deployment and scalability, combining un-limited internal/external users in a "real-time" environment.
- It has an interface capability.

- It provides web visibility and processing capability (24x7)

#### **Advantage of Channel Financing**

Channel financing can help to form an integrated value network where suppliers, organizations, distributors, dealers, banks etc. work as partners to maximize the value of the network. It has the leading role to play in designing and implementing this network. It has the following advantages:

- Rapid deployment and scalability – CF applications are based on an open internet application architecture that enterprise wide scalability and rapid deployment to numerous end-users.
- Real time processing- CF creates an open, integrated system that addresses the complex e-business and SCM needs and requirements by allowing the exchange of real time information to take place with employees and their trading partners (customers, suppliers, distributors, manufacturers etc.) This real time data enables users to make informed ordering, purchasing and inventory decisions and thereby enhances the quality and scope of customer service.
- Return on investment- in addition to increasing productivity and reducing overall operating expenses, CF maximizes selling opportunities by capturing valuable customer information, buying patterns, frequency of purchases, preferences, order history etc. The organization can use this information for cross-selling, up-selling and promotional activities.

#### **Limitations of Channel Financing**

Along with so many advantages, CF has certain limitations too:

- CF is a wide concept and it may be difficult to analyze all the relevant financial parameters.
- The poor IT infrastructure, outside the Indian organizations, prevents sharing of information on a real-time basis between channel partners.
- Wide geographical spread of the markets is a hindrance to the development of CF in India.
- Third Party logistics service providers are few and at a nascent stage in India.
- Large number and small size of suppliers and dealers make it difficult to integrate operations.
- For the system to remain profitable for channel members, only certain number of suppliers, dealers, distributors etc. can be covered based on parameters like turnover, net worth, profitability, previous record, number of year of relationship with organization etc. so many clients like small clients having low turnover, net worth etc. clients having low creditworthiness, clients relatively new to the organization etc, cannot be covered.
- Initially, it is difficult to get some eligible suppliers, distributors, dealers etc. in the new system because of their resistance to change, which can reduce the profitability of the system.
- Banks may not be able to provide total solution finance for all the organization's products. It might be for specific products or product families.

In this way the changing business environment and emerging business challenges have stimulated the formation of cooperative and collaborative strategic alliances among channel partners. Channel financing enhances speed of the organizations and system, enhances visibility of processes and enables information management by deploying IT rules and techniques. It leads to significant direct and indirect cost benefits for the organizations. It reduces non value adding activities, improves profitability, nurtures long term relationships and enables value added activities for the organization.

There are certain entry barriers to channel financing like adequate financial resources, robust technical infrastructure, risk management expertise, established brand name/ franchise etc., but they can be easily managed with the help of web technologies, Rapid deployment and scalability, real time processing and maximization of ROI (Return on Investment) are the ultimate advantages of Channel Financing.

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## DEVELOPMENT OF E-BANKING ALONG WITH RISK FACTOR (FRAUD)

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Vinod Kumar Sablaniya\*

### Abstract

Renovation in Indian banks is taking place from all aspects and is being refined as time proceeds and the products of the banking industry are enthusiastically modifying the face of banking. This paper defines the way renovation has affected the banking sector and the approach of using IT products which has changed the face of banking sector in India. It tells about the current scenario of the banking industry; and the factors that have brought changes in the industry; and how these factors have contributed to the development of banking. This paper shows how banks have now flourished into one-stop Supermarkets. Their focus is flowing from bulk banking to class banking with introduction of value added and customized products. Technology helps banks to create what appearances like a branch in a business building's lobby without taking to hire manpower for manual operations. These branches are 24 x 7 working which has been made possible due to ATMs, Tele banking, Internet Banking, E-banking and Mobile Banking. The technology determined delivery channels which are used to reach maximum customers in most effective manner and at lowest cost. The splendor of these banking novelties is that it puts both customer and banker in a win-win situation. The need is to design a system to promote marginal efficiency of investment technology and to increase the gap between marginal benefits and marginal cost involved in Banking Innovation with special reference to technological up gradation. In the paper survey on use of several E-channels and issues related to them is also shown.

**Keywords:** IDRBT, MICR, RTGS, E-banking, ATMs, NACHA, ECS, Risk factor, Fraud.

### Introduction

Improvements in technology employ innovations in a rapid speed in our daily life. With the increased competition in banking sector and increasing demand of customer is forcing banks to provide their service online. One of the major users of communication

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and information technology in business life is Banking Industry and technology has changed the face of the banking industry through computation.

### **Milestones In Indian Banks and I T Transformation**

- **MICR (Magnetic Ink Character Recognition)**

During the years 1986-88 MICR was introduced. MICR technology was used principally by the banking industry to smooth the progress of the processing of cheques and develops the routing number and account number at the bottom of a cheque. This allowed computers to translate information (like account numbers) off printed certificates.

- From the late nineties all branches started handling government business to perform their functions using technology for facilitating computerization of government business.
- IDRBT (Institute for Development & Research in Banking Technology) In 1996 a committee was formed by RBI in Hyderabad to upgrade technology in payment system. IDRBT was thus established as a result of recommendation of committee.
- Under the Information Technology Act, 2000; IDRBT ensured that e-banking transactions will get requisite legal protection with the commencement of Certification Authority (CA) functions.

- **IS AUDIT (Information Systems Audit)**

Its purpose is to determine systems internal control design and effectiveness which included security protocols. Guidelines related to it were made and circulated to ensure IS audit in banks.

- **ATM's (Automated Teller Machines)**

Enabling IT channels which enhances customer service at banks in areas such as cash delivery through card based transaction settlements, Automated Teller Machines (ATMs). etc.

- **E-BANKING (Internet Banking)**

E-Banking allows financial institution customers to conduct a secure financial transaction on website to have personal access to internet a customer must register for the service to the institution and some password will be set-up for verification of customer.

- **RTGS (Real Time Gross Settlement)**

It is a transfer system for funds where money is being transferred from one bank to another bank on gross and real time basis. When there is no waiting period for payment transaction the settlement is in 'real time'. One to one basis settlement of transaction without clustering or mesh with other transaction is 'gross' settlement.

### **Transformation Stages in Indian Banks**

**Table: Transformations**

| Stage of transformation              | Structure of Banks                           | Objectives of the Banks                | Nature of technology used                         |
|--------------------------------------|----------------------------------------------|----------------------------------------|---------------------------------------------------|
| Pre-Nationalized Banks (before 1969) | Private control of banks<br>Control of Govt. | Higher profitability<br>Social Banking | Manual work<br>Limited Computerization<br>E-banks |

|                                                                                    |                                                                                                            |                                                                       |                               |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------|
| Post-Nationalized Banks (1969-90)<br>Economic reforms (1991-2000)<br>Current stage | Entry of foreign and NPSBs-Social Banking to IT based Banks<br>Implementation of various committees report | Higher profitability- Fierce Competition<br>New products and Services | Maximum use of IT-Mobile ATMs |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------|

Sources: Authors

**Table: Process of Transformation**

| Parameters of Transformation                                                                                                                                      | Process                           | Implications                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Structure<br>Business re-engineering<br>Human resources development<br>Work culture<br>Information Technology<br>System Process and Procedure<br>Ethos/Philosophy | IT as the catalyst of information | Improved and efficient structure<br>Improved Vision for business<br>Productivity, Profitability and Efficiency has increased.<br>Innovation are taking place.<br>International Outlook<br>Inspire employees<br>More ethical work culture<br>Vision for global economy |

Source: Authors

**Technology Used**

- **Automated Clearing House (ACH):** To handle cheques in clearing house computers are used. It is difficult to clean up, substitute and establish transactions within many banks. To increase the process and wiping the operations immediately an deficiently computers are used in cleaning house. ACH allows huge number of credit and debit transactions in batches.
- **National Automated Clearing House Association (NACHA):** It helps to transfer debit for point-of-purchase conversation check. ACH payment is being implemented by both commercial sector and government. Business is also improving by using ACH to accumulate online payment from customers than accepting debit or credit cards. NACHA and Federal Reserve established rules and regulations to govern ACH network.
- **Electronic Clearing Services (ECS):** ECS uses services of cleaning house to transfer funds from one to another bank account. This is used for large transfers from one to many accounts or vice-versa.

**Types of ECS**

Two types of ECS are ECS (credit) and ECS (debit).

- ECS (credit)-it is used to allow credit to huge number of receivers by raising only one debit to an account like interest, salary payment, pension.
- ECS (Debit)-it is used to inflate debits to a huge number of accounts of customers or account holders for honoring a particular institution e.g. utility companies payments like telephone, house tax charges, water tax charges.

**Table: ECS Transaction for the Month of March Value In Rs. Billion**

| Item       | 2011   | 2012   | 2013   | 2014   | 2015   |
|------------|--------|--------|--------|--------|--------|
| ECS Credit | 110.33 | 134.92 | 170.55 | 214.79 | 151.26 |
| ECS debit  | 60.78  | 77.47  | 95.22  | 126.34 | 155.17 |

Source: RBI, Annual Report 2014-15

**National Electronic Fund Transfer (NEFT):**

It is an online system by which funds of Indian financial institutions are being transferred. Funds below Rs 2,00,000/- are mainly transferred by it. Structured financial messaging solutions (SFMS) were used as a platform to make NEFT. To maintain security in NEFT public key infrastructure (PKI) technique was used.

**Electronic Funds Transfer (EFT):**

It is electronic transfer or exchange of money from one to another account. This exchange of money takes place across multiple financial institutions through computer systems to help banks offering money transfer service to their customers from any bank branch account to other branch bank.

**Table : EFT/ NEFT Transaction for the Month of March Value in Rs. Billion**

| Item             | 20011   | 2012    | 2013    | 2014    | 2015    |
|------------------|---------|---------|---------|---------|---------|
| EFT/NEFT DEBITS  | 1806.76 | 2403.89 | 3602.48 | 5312.25 | 7173.09 |
| EFT/NEFT CREDITS | 1806.76 | 2403.89 | 3602.48 | 5312.25 | 7173.09 |

Source: RBI, Annual Report 2014-15

**Cards Transactions**

Debit card is an alternative method of payment of cash when transactions are being made. While using it cardholder can see available balance in account. Debit cards are widely used to withdraw cash from ATM, to purchase online on internet, making bill payments, transferring funds, etc. during opening of account banks provide free of cost debit cards. From Jan 1st 2011, RBI announced that user has to enter password on ATM for every transaction with debit card.

**Table: Card Based Payment Transaction for the Month of March Value in Rs. Million**

| Item         | 2011       | 2012        | 2013       | 2014       | 2015       |
|--------------|------------|-------------|------------|------------|------------|
| CREDIT CARDS | 963.721    | 1208.715    | 1492.85    | 1661.70    | 2343.98    |
| DEBIT CARDS  | 1061653.47 | 1317167.704 | 1556405.61 | 1796098.93 | 1987479.84 |

Source: RBI, Annual Report 2014-15

**Core Banking**

To adopt core banking solutions (CBS), computerization in branches of banks is closely related with the technological development.

**Table : Branches Under Core Banking (In %)**

| Name of the Bank    | Branches under core banking solution |
|---------------------|--------------------------------------|
| Public sector banks | 95%                                  |
| Nationalize banks   | 89.9%                                |
| State bank groups   | 100%                                 |

Source : Details On Trends and Growth of Banking in India 2014-15



**Automated Teller Machine (ATM):**

ATM is used for many functions of banks like to withdraw cash, to print bank statements, to transfer funds, reservation of train tickets, to pay premiums etc.

**Table: Growth in ATMs for the Month of March (2011 To 2015)**

| Years   | No. of ATMs |
|---------|-------------|
| 2010-11 | 41268       |
| 2011-12 | 47545       |
| 2012-13 | 55760       |
| 2013-14 | 83379       |
| 2014-15 | 89061       |

Source: Cyber Media DQ Estimates Research

At the end of march 2013 ATM's were installed in the country, largest share in off-site ATM's were eighth private sector banks while largest share in on-site ATM's was with nationalized banks.

**INFINET**

Many components like servers, connecting networks, communication channels etc. are required for working of e-banking. Various service providers were established and connected in India by RBI to control and monitor e-banking. Some service of provider is INFINET which stands for Indian Financial Network. Services which are provided by INFINET are e-mail, transmission of inter-city cheque realization advices, electronic clearing services-debit and credit.

**Table: Pros and Cons of I T Technology**

| Dimensions of IT Innovation    | Limitations of Electronic-Only Retail Commercial Banking                                                                                                                                                                                                                                                                                                                                                            | Potential for Electronic-Only Retail Commercial Banking                                                                                                                                                                                                                                                                          |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Innovation in service offering | <p>-Each new technological innovation accounts for (proportionally) smaller reductions in price differentials.</p> <p>-Bank customers remain unwilling to pay for interfaces for the new technology. While merchants expect to share the revenue of new payment through lower commission charges.</p> <p>-Defection rates remain low, thanks to the inertia of bank customers, which has been historically high</p> | <p>-Greater price transparency.</p> <p>-Greater convenience to consumers.</p> <p>-Each customer segment interacts with the bank through the most cost effective distribution channel.</p> <p>-Innovations such as smart cards and digital cash.</p> <p>-creation of new customer segments and improved Relationship banking.</p> |

|                                   |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Functional Innovation | <p>-The possibilities of scale Economies make it very hard for potential entrants to catch up, even with technically better systems.</p> <p>-Continued importance of contextual non-standard sable Elements to assess risks.</p> <p>-More specialized labor force.</p> | <p>-Enhanced financial performance due to reductions in overhead expenses.</p> <p>-Standardized of activities in payment and lending services<br/>Eliminates uniqueness of proven expertise and ability to control losses from payment activities efficiently.</p> |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Source: Authors

### Threats

The most up to date fraud which is now considered as the secured method of crime not including any physical damage is the technological frauds in banks. Since 1994 computerization of banks had started in India. Working model for local area network and wide area was developed by reserve bank of India by founding unique microwave stations in order to have safe and quick money transactions. The main job performed by computers in banks is preserving debit-credit records of accounts, carrying out electronic fund transfer, operating automated teller machines, making periodic balance sheets, printing out accounts statements etc.

### Risk Factors

Computer's internet facilities have revolted international banking to transfer funds and substitute data of interest concerning to banking and to perform other functions of banks and by giving different passwords and pin numbers.

Some of the negative effects of computers are classified as:

### Computer Crimes

- **Computer Frauds**

Computer frauds are those in which misuse or defalcations are accomplished by altering with data record of computer or program, etc. whereas computer crimes are those that are committed with a computer i.e. where a computer acts as a standard.

The three most common are:

- **Cheque Frauds**

The tenacious growth of paper cheques joined with the readily availability of most recent technology has resulted in shocking rise in cheque frauds in banks of India. It is fascinating to note that cheques as a payment method is still having a major position in both developing and developed countries. Hard work is being done by banks to discourage customers from the use of paper cheques. Additional problems related to cheques are inbuilt manually like process of handling, high cost of transportation between parties, handling process

➤ **Concept and Magnitude of Cheque Frauds**

There are many ways to classify cheque frauds. One wide distinction is 'internal' and 'external'. Internal cheque frauds are those in which schemes are formulated by insiders –employees are responsible for authorizing, creating and processing cheques. External cheque frauds are those in which schemes are made by independent operators or by classified gangs.

Most familiar forms of external frauds are :

- ✕ Modification of cheque details
- ✕ Creation of fake cheques
- ✕ Forgery of cheques

Physical controls of security used are high resolution micro printing, watermarks, security inks and reflective holograms etc.

▪ **ATM FRAUDS**

ATM's are electronic machines that are connected to the accounts and records of banking institutions. It allows customers to make banking transactions without going to banks. ATM's are implicit banks that allows users to withdraw money, pay bills, deposit cash etc. ATM machine is derived with the help of an access drive i.e. a card, code i.e. personal identification number or through other methods of access to account of customer or any combination thereof.

➤ **Fraud Related to ATMs**

Commitment of frauds can be by both insiders and outsiders. It is known that number of frauds will rise with the increase in number of transactions. Frauds can occur due to carelessness on part of both the cardholder and part of bank. If the holder of card does not follow preventative measures then is exposed to risk.

- ✕ A cheat may go through the carbons or discarded receipts to find out the card number illegally.
- ✕ A clerk who is dishonest makes an imprint from the charge card or credit card for his personal use.

In addition to all these, E-mail and Internet-related fraud schemes are carry out with the increasing frequency, creativity and intensity.

Fraudsters adopt a number of methods which are as follows:

- ❖ **Phishing:** Phishing is the center stage of Internet Scams. Phishing is the way of sending emails at arbitrary, indicating to come from a candid company which is operating on the internet. When the customers make an attempt, its request disclosing information at a bogus website will be operated by them. Information entered on the bogus website is captured by the criminals and they use it for their own purpose.
- ❖ **Skimming :** Fraudsters use skimmers to make fake ATM cards, a swipe-card device which reads consumer's ATM card's information. Scammers swipe information from credulous customers by inserting onto an ATM. They take a blank card and by inserting the card they are

able to encode all the information when they swipe from an ATM. And through a small camera which is mounted on the ATM the skimmer catches the PIN.

- ❖ **Spoofing:** The invader creates a misleading context which false you in making an unsuitable security- appropriate decision. For example false ATM machines have been set up. If they will be having PIN number they will be having enough information to steal from the account.

- **Credit Card Frauds**

Credit card is made of polyvinyl chloride sheet. The innermost sheet of credit card is known as core stock. Personal data is embossed over it and the cards are of fixed size. Fraudsters of credit cards steal credit cards from banks, clients and merchants. Credit card fraud is committed in many ways like:

- ✖ Authentic cards are distorted.
- ✖ Forged cards are made
- ✖ Duplicitous telemarketing is made with credit cards.
- ✖ Forged cards are taken on duplicitous applications on the address and name of other people. People have concern that as e-commerce and internet facilities are expanded on large scale than credit card frauds will increase rapidly.

- **Issues In Risk Management In Online Banking**

The problem arising with the banks is that they have already invested huge amount of money in the online initiatives and their online offerings are remaining unprofitable. Banks are already having its existing customers so they are not getting large number of customers. Just enrolling customers to use the id will not be sufficient, the user will have to use the website frequently. Banks should make efforts to increase the usage of their site by customers and co-ordinate with the branches effectively. By doing this they will be able to obtain maximum value which would include cost reduction, higher customer retention and cross-selling opportunities. An important issue on which banks must focus on is integrating online channel with all other banks. Integrated channels working together are effective than a group of channels which are working without co-ordination. Internet banking initiatives like risk management and implementing controls follow same principles like other processes. Most dangerous thing is considering risk management a technical problem and leaving it on IT management Following are some of the risks which are integral in online banking:

**Strategic Risk**

It is one of the prospective and current risks that affect capital arising and earnings from divergent business decisions associated mainly with Board and Management decisions. As senior management is responsible for developing the business's strategy and establishing of management affective oversight over risks, then they are predictable to take an informed and planned strategic decision as whether and how the bank is providing e-banking services. There are many managers who do not understand strategic and technical aspects of the Internet Banking. Encouraged by the competition, banks introduce online banking without cost-benefit analysis even if the management does not

have plan, manage and monitor the performance of technology related to products, services and delivery channels. Poor investment decisions and e-banking planning can increase a financial institution's strategic risk.

### **Operational-Transactional Risk**

Transactional risk is also known as IT or security risk which affects capital arising and earnings from fraud, abandon, error and the inability to maintain predictable service levels. One of the important challenges faced by the banks in the online environment is predicting and managing the number of that the banks want to obtain. Certain factors like structure and complexity of banking products, types of services offered, difficulty of Understanding and executing new technologies will increase the level of operational risk, especially when the institutions recommend innovative services that are not yet standardized.

### **Information Security Risk**

Information security risk has negative impact on capital arising and earnings out of information security processes, and thus revealing the institution about the insider attacks or malicious hacker, denial-of-service attacks, viruses, data theft, fraud and data destruction. Most sensitive computer systems are used for storing highly confidential information and for high value payments which are tend to be most carefully secured. The programmes and viruses or anti viruses and security systems must be updated whenever required.

### **Credit Risk**

A customer's failure to meet his financial commitments is called credit risk. Internet banking allows customers to apply for praise or credit from anywhere in the world. It is very difficult for the banks to verify the identification of the customer, if they are making payment through the internet. Verifying guarantees and if the person is in another country then in case of conflict different dominion procedures may cause difficulties.

### **Suggestions and Recommendations**

- **For ATMs**
  1. Avoid leaving cards at ATM.
  2. Watch over the privacy of PIN number as you safeguard hard cash.
  3. Never keep ATM card and PIN number together.
  4. Don't give your ATM card to anyone and never disclose Pin to other people.
  5. Do remember PIN.
- **For Credit Cards**
  1. While using the card keep an eye on it.
  2. Don't give your credit card information on phone call.
  3. Don't reply to „phishing' mails.
  4. Don't use unsecured websites
  5. Immediately sign your credit card as soon you receive it.

### **Objectives**

- 1 Evaluating how to computerization takes place in banking sector.
- 2 Estimating the convention of various banking tools.
- 3 Evaluating the usage pattern of various I.T tools in banking industry.

- 4 Estimating the precautionary measures that litigant take against frauds.
- 5 Evaluating preventing measures to be taken against frauds.

### Research Methodology

This study based on descriptive study which includes a questionnaire survey. Data was collected from 79 respondents who were the users of various IT tools/services. Objective questionnaire was used-as a result of which responses were tabulated.

### Analysis

79 litigant's questionnaires were filled. The data was gathered through a tested and ordered questionnaire. Respondents were chosen randomly, making sure that they were shrewd customers using latest banking products.

### Findings

The findings were as follows:

**Table: Consciousness about the Technology Threats**

| Types    | Yes | No |
|----------|-----|----|
| Phishing | 40  | 39 |
| Spoofing | 29  | 50 |
| Spamming | 53  | 26 |

Spamming clearly is most dominating of these three, though all of them are dangerous. What is not clear is that whether people are really able to appreciate the dangers it poses or maybe they just take it for granted. Phishing websites are common these days and it's secure to note that all respondents at some point or other have visited a phishing site. It is hazardous sign thus that they are not well-known with the huge dangers it poses. Similar threats exist with spoofing.

**Table: Preventive Measures Taken**

| Questions                                                        | Yes | No |
|------------------------------------------------------------------|-----|----|
| Have you ever given your credit card information on a unverified | 40  | 39 |
| Have you ever replied of phishing mails                          | 29  | 50 |
| Surfed unsecured website                                         | 53  | 29 |
| Written your PIN number on your credit card                      | 24  | 55 |
| Written your credit card number in a public place                | 15  | 64 |
| Did you ever carried the only needed card                        | 24  | 55 |
| Do you change your TM PIN every month                            | 13  | 66 |
| Do you use your birth date, phone numbers as your pin            | 53  | 26 |
| Do you always ensure that card is swiped in your presence        | 47  | 32 |
| Do you save receipts generated                                   | 31  | 48 |

Source: Primary Data

The above table shows the preventive measures taken by people. It is evident that people are making some silly mistakes with their transactions.

**Table: Marking For Unseen Service Charges**

| E-channels       | Most Reasonable | Reasonable | Undecided | Unreasonable | Most Unreasonable |
|------------------|-----------------|------------|-----------|--------------|-------------------|
| Internet banking | 34              | 20         | 14        | 9            | 2                 |
| Mobile banking   | 0               | 15         | 17        | 18           | 29                |
| ATM              | 22              | 34         | 23        | 0            | 0                 |
| Debit Card       | 5               | 31         | 16        | 15           | 12                |
| Credit Card      | 14              | 46         | 10        | 9            | 0                 |
| Smart Card       | 11              | 28         | 13        | 16           | 11                |
| Tele-Banking     | 1               | 48         | 13        | 7            | 10                |

Internet Banking is clearly leading here, followed by ATM's and DEBIT CARD's. it is pleasant to see that ATM's are growing as inexpensive, efficient and paperless way of dealing.

#### **Conclusion**

In the beginning of new technological period of certain technology in banks, technology is the one which is subjected to and has balanced fundamental changes in the banks. We implicit from the Paper- Firstly It is a time that we have initiated ourselves in the next course and touched new heights of brilliance in the working and efficiency of banks. Secondly Safety measures in terms of firewalls, data interruption, and digital certification are few safety security measures which must be rooted in the software used by banks. Thirdly Regular quest for improvement of skills, mission, commitment and vision to perform efficiently for gaining profit are some area's high needs urgent attention.

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## SOURCES OF FINANCIAL RESOURCE MANAGEMENT: AN OVERVIEW

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Dr. K. C. Sharma\*

### Abstract

The present study, an effort has been made to review the analysis of financial resource management of Central Co-operative Banks in Rajasthan viz. Jaipur Central Co-operative Bank, Alwar Central Co-operative Bank, Ajmer Central Co-operative Bank, Jodhpur Central Co-operative Bank and Pali Central Co-operative Bank in order to improve their performance in future. To supplement data contained in the annual reports, personal discussions were also held with the officials of the bank mainly to go deeper in the study and also to clarify certain points which emerged out of the study. The period covered for detailed study extends from 2009-10 to 2013-14. The data for the study have been obtained from the Annual Reports of the Banks, Co-operative Credit Structure in selected states and other publications of the Bank and Co-operative Departments. The Central Co-operative Banks play an important role in the Indian economy. The present study is confined to the Central Co-operative banks in India with special reference to Rajasthan. For this purpose five Central Co-operative Banks viz. Jaipur Central Co-operative Bank, Ajmer Co-operative Bank, Alwar Co-operative Bank, Jodhpur Central Co-operative Bank and Pali Central Co-operative Bank have been taken in the present study data relating to the past four years from 2009-10 to 2013-14 have been analyzed. Financial Resource Management of Central co-operative Banks in India (with special reference to Rajasthan) will help to draw meaningful conclusions and will indicate out of line trends. This will help in suggesting improvements.

**Keywords:** *Resource, Credit Structure, Trends, utilization, Ratio, Fund flow.*

### Introduction

Financial resources management refers to that part of management activity, which is concerned with the planning and controlling of firm's financial resources. Financial resources management is a part of overall management. All business decisions involve finance. Where finance is needed, role of finance manager is

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inevitable. Financial resources management deals with rising of funds from various sources, dependant on availability and existing capital structure of the organisation.

The sources must be suitable and economical to the organisation. Emphasis of financial resources management is more on its efficient utilization, rather than rising of funds, alone. The scope and complexity of financial resources management has been widening, with the growth of business in different diverse directions. As business competition has been increasing, with a greater pace, support of financial resources management is more needed, in a more innovative way, to make the business grow, ahead of others. Financial resources management is concerned with optimum utilization of resources. Resources are limited, particularly in developing countries like India. So, the focus, everywhere, is to take maximum benefit, in the form of output, from the limited inputs. Financial resources management is needed in every type of organisation be it public or private sector. Equally, its importance exists in both profits oriented and non-profit organisations. In fact, need of financial resources management is more in loss-making organisations to turn them to profitable enterprises. Study reveals that many organisations have sustained losses, due to absence of professional financial resources management.

### **The Present Study**

The central cooperative banks play an important role in the Indian economy. The present study is confined to the central cooperative banks in India for this purpose five central cooperative banks viz. Jaipur Central Co-operative Bank, Ajmer Central Co-operative Bank, Alwar Central Co-operative Bank, Jodhpur Central Co-operative Bank and Pali Central Co-operative Bank have been taken in the present study data relating to the past four years from 2009-10 to 2013-14 have been analyzed. A comparative study of Central Co-operative Banks in India with special reference Rajasthan will help to draw meaningful conclusions and will indicate out of line trends. This will help in suggesting improvements.

### **Methodology**

The data relating to Financial performance of the selected Central cooperative banks in Rajasthan viz. Jaipur Central Co-operative Bank, Ajmer Central Co-operative Bank, Alwar Central Co-operative Bank, Jodhpur Central Co-operative Bank and Pali Central Co-operative Bank have been collected from the published annual reports and accounts of the above mentioned Central cooperative banks for the year from 2009-10 to 2013-14 the process of data as follows:

- **Collection of Data:** The various data have been collected from registrar office and chartered accountants. Financial statistic and operational data along with other information's have been collected from questionnaire, various journals, periodicals and newspapers. Personal interviews of the chairman managing director, manager, public relation officers and many other executives and official staffs of the said Central cooperative banks have been conducted to collect some primary data regarding the operational efficiency of the central cooperative banks.

- **Classification and Tabulation:** These data have been classified through profit and loss account and balance sheet of the central cooperative banks.
- **Analysis:** For the analysis of these data, ratio analysis, funds flow analysis and trend value analysis have been applied to conduct and make the present study more fruitful.
- **Findings and Suggestions:** Financial resources management of an individual Central Co-operative bank is insignificant. Therefore, a comparative study have been made, for this purpose, the income statement and financial statement of the Central Co-operative banks have been recasted and presented in a condensed form.

### **The Scope of the Study**

The study includes the following cooperative banks:

- Jaipur Central Co-operative Bank Limited, Jaipur
- Ajmer Central Co-operative Bank Limited, Ajmer
- Alwar Central Co-operative Bank Limited, Alwar
- Jodhpur Central Co-operative Bank Limited, Jodhpur
- Pali Central Co-operative Bank Limited, Pali

The study has covered a period of five years from 2009-10 to 2013-14

### **The Object of the Study**

The primary object of the study “Financial Resource Management of Central Co-operative Banks in India (With special reference to Rajasthan)” is to obtain an insight into the financial resource management of the Central Co-operative banks under study. The financial resource management has been determined with a view to assess the efficiency and effectiveness of the banks under the study. It seeks to review the changes, which have taken place in the banks under the study. The financial resource management of the selected cooperative banks under study for last five years have been measured and conclusions have been drawn which have been provided guidelines to management, government, investors, creditors, workers and consumers to take decisions related to this own sphere of interest. An evaluation of financial and operating performance has been done from the accounting point of view in orders to assess and evaluate the effectiveness and efficiency of the related banks in India under study. The study has also measured at length the managerial efficiency in various financial areas.

### **Hypothesis**

The hypothesis of the study has been as follows:

- Ho** : Financial resources are not managed properly in the Central Co-operative Banks.
- H1** : Financial resources are managed properly in the Central Co-operative Banks.

### **Sources of Financial Resource Management**

There are various sources of finance such as equity, debt, debentures, retained earnings, term loans, working capital loans, letter of credit, euro issue, venture funding etc. These sources are useful under different situations. They are classified based on time period, ownership and control, and their source of generation. Sources of finance

are the most explored area especially for the entrepreneurs about to start a new business. It is perhaps the toughest part of all the efforts. There are various sources of finance classified based on time period, ownership and control, and source of generation of finance. Having known that there are many alternatives of finance or capital, a company can choose from. Choosing right source and right mix of finance is a key challenge for every finance manager. The process of selecting right source of finance involves in-depth analysis of each and every source of finance. For analyzing and comparing the sources of finance, it is required to understand all characteristics of the financing sources. There are many characteristics on the basis of which sources of finance are classified. On the basis of time period, sources are classified into long term, medium term, and short term. Ownership and control classifies sources of finance into owned capital and borrowed capital. Internal sources and external sources are the two sources of generation of capital. All the sources of capital have different characteristics to suit different types of requirements. Let's understand them in a little depth.

#### **According to time-Period**

Sources of financing a business are classified based on the time period for which the money is required. Time period are commonly classified into following three:

- **Long Term Sources of Finance:** Long term financing means capital requirements for a period of more than 5 years to 10, 15, 20 years or may be more depending on other factors. Capital expenditures in fixed assets like plant and machinery, land and building etc of a business are funded using long term sources of finance. Part of working capital which permanently stays with the business is also financed with long term sources of finance. Long term financing sources can be in form of any of them:

- Share Capital or Equity Shares
- Preference Capital or Preference Shares
- Retained Earnings or Internal Accruals
- Debenture / Bonds
- Term Loans from Financial Institutes, Government, and Commercial Banks
- Venture Funding
- Asset Securitization
- International Financing by way of Euro Issue, Foreign Currency Loans, ADR, GDR etc.

- **Medium Term Sources of Finance:** Medium term financing means financing for a period between 3 to 5 years. Medium term financing is used generally for two reasons. One, when long term capital is not available for the time being and second, when deferred revenue expenditures like advertisements are made which are to be written off over a period of 3 to 5 years. Medium term financing sources can in the form of one of them:

- Preference Capital or Preference Shares
- Debenture / Bonds
- Medium Term Loans from

- Financial Institutes
- Government, and
- Commercial Banks
- Lease Finance
- Hire Purchase Finance
- **Short Term Sources of Finance:** Short term financing means financing for period of less than 1 year. Need for short term finance arises to finance the current assets of a business like inventory of raw material and finished goods, debtors, minimum cash and bank balance etc. Short term financing is also named as working capital financing. Short term finances are available in the form of:
  - Short Term Loans like Working Capital Loans from Commercial Banks
  - Fixed Deposits for a period of 1 year or less
  - Advances received from customers
  - Creditors
  - Payables
  - Factoring Services
  - Bill Discounting etc.

#### **According to Ownership and Control**

Sources of finances are classified based on ownership and control over the business. These two parameters are an important consideration while selecting a source of finance for the business. Whenever we bring in capital, there are two types of costs – one is interest and another is sharing of ownership and control. Some entrepreneurs may not like to dilute their ownership rights in the business and others may believe in sharing the risk.

- **Owned Capital:** Owned capital is also referred as equity capital. It is sourced from promoters of the company or from general public by issuing new equity shares. Business is started by the promoters by bringing in the required capital for startup. Owners capital is sourced from following sources:
  - Equity Capital
  - Preference Capital
  - Retained Earnings
  - Convertible Debentures
  - Venture Fund or Private Equity

Further, when the business grows and internal accruals like profits of the company are not enough to satisfy financing requirements, the promoters have choice of selecting ownership capital or non-ownership capital. This decision is up to the promoters. Still, to discuss, certain advantages of equity capital are as follows:

- It is a long term capital which means it stays permanently with the business.
- There is no burden of paying interest or installments like borrowed capital. So, risk of bankruptcy also reduces. Businesses in infancy stages prefer equity capital for this reason.

- **Borrowed Capital:** Borrowed capital is the capital arranged from outside sources. These include the following:

- Financial institutions,
- Commercial banks or
- General public in case of debentures.

In this type of capital, the borrower has a charge on the assets of the business which means the borrower would be paid by selling the assets in case of liquidation. Another feature of borrowed capital is regular payment of fixed interest and repayment of capital. Certain advantages of borrowing capital are as follows:

- There is no dilution in ownership and control of business.
- Cost of borrowed funds is low since it is a deductible expense for taxation purpose which ends up saving on taxes for the company.
- It gives the business a leverage benefit.

#### **According to Source of Generation**

- **Internal Sources:** Internal source of capital is the capital which is generated internally from the business. Internal sources are as follows:

- Retained profits
- Reduction or controlling of working capital
- Sale of assets etc.

The internal source has the same characteristics of owned capital. The best part of the internal sourcing of capital is that the business grows by itself and does not depend on outside parties. Disadvantages of both equity capital and debt capital are not present in this form of financing. Neither ownership is diluted nor fixed obligation / bankruptcy risk arises.

- **External Sources:** External source of finance is the capital which is generated from outside the business. Apart from the internal sources finance, all the sources are external sources of capital.

Deciding the right source of finance is a crucial business decision taken by top level finance managers. Wrong source of finance increase the cost of funds which in turn would have direct impact on the feasibility of project under concern. Improper match of type of capital with business requirements may go against smooth functioning of the business. For instance, if fixed assets, which derive benefits after 2 years, are financed through short term finances will create cash flow mismatch after one year and the manager will again have to look for finances and pay the fee for raising capital again.

#### **Conclusion and Findings**

Financial statements shows a combination of recorded facts, accounting conventions, personal judgments and conventions applied in accounting affect them materially. In fact, financial statements endow with a summarized view of the operations of the banking business. The financial statements supply basic information for decision making purposes and objective of all business enterprises is to earn profit, as a result it is necessary for the owners of the enterprise to know how much profit they

have made for a particular period of time and what is the financial position. The financial statements of banks provide a gauge of performance and are therefore, used as media to smooth the progress of assessment by top management as to the degree of accomplishment of planned profit and financial growth.

Financial statements forms basis of financial appraisal so banks should provide maximum information regarding its presentation in different field. Central co-operative banks provide all mandatory information but it does not provide detailed information regarding N.P.A., Cash Flow Statement, Human Resource Accounting, Inflation Accounting etc. However banks should also provide such information. Current ratio in central co-operative banks is always nearer to the ideal of 2:1 during the period under study. It has shown a fluctuating tendency. Thus, it can be concluded that the banks have maintained sufficient cushion of protection to the current liabilities. Quick ratio in central co-operative banks is always nearer to the ideal of 1:1 during the period under the study. Thus, it can be concluded that the banks have maintained sufficient funds to need the current liabilities at a short notice. Absolute liquidity ratio in central co-operative banks is always fluctuates which indicates that cash position in the banks is quite satisfactory. Working Capital turnover ratio in Central Co-operative Banks is always fluctuates between 5% to 7% of working capital, which shows that the position of the banks is quite satisfactory. Profitability analysis of the Banks clearly indicated that the Banks were economically viable during the period of study because the banks have a low cost of management. Total cost of management was below the standard norms 2% of total working capital.

Income and Expenditure position of Jaipur CCBL shows an erratic trend, as at one side income has decreased while on other side expenditure has increased during the period. But in spite of it net profit has been increased due to some non operating income. But it has decreased due to competition in the economy. Position of Alwar CCBL is more or less moving in the same direction. Position of Ajmer CCBL is increasing in comparison to previous five years. However, the Jaipur CCBL has shown better performance than Alwar CCBL during under the study. Continuous increase in Spread Ratio, Return on Total Assets Ratio and Return on Owner's Equity Ratio proves the view of high profitability. Ratio of net profit to total assets shows fluctuating trend which indicates a decreasing tendency, which is not a good sign. Ratio of net profit to proprietor's funds has been decreasing continuously during the period under review.

### **Suggestions**

Following are the main suggestions of the study:

- There must be a fixed cadre system for management of central co-operative banks.
- Only qualified and able persons having full banking experience should be added in top management.
- Promotional avenues should be enlarged on merit-cum-seniority basis.
- The bank should have adequate separate staff for inspection and supervision.
- Internal system of control is required to be strong and flexible. This would minimize frauds and embezzlement of money.

- Supervision, inspection and audit should be made effective.
- It is also suggested that as far as possible the salaries of Central Co-operative Banks employees should be parallel to their counterparts in commercial banks.
- New branches in Alwar, Ajmer, Pali etc. should be opened, particularly in unbanked and potential areas.
- The management has to face multiple problems at the time of sanctioning loans. Hence, it is suggested that the bank should develop a scientific landing programme.
- The loan procedure should be simplified and should be advanced only as and when actually required.
- Pre-landing appraisal system, post-landing supervision technique and monitoring of credit should be toned up through improved system, training and strengthening the recovery cell.
- Banks should reorient their loan policies on the basis of crop loan system; loan should be given in installments and with minimum delay.
- The scales of finance should be decided on the basis of assessment of actual expenditure on cultivation.
- The manipulation practices in disbursement of loan amounts should be minimized.
- It is also suggested that each and every farmer should be issued a "Loan Book" in which granting and collection of loans may be noted down by the bank authorities.
- New areas should be searched out for advancing non agricultural loans.
- While economic compulsions, utter poverty and natural calamities stand in the way of repayment of loans, yet the Central Co-operative Bank cannot and should not complacence to think that these loans are more by way of charitable distribution than a business advance.
- The Government publicity should be so oriented as to arouse the conscience of the borrowers to repay rather than make them think that these are not meant for repayment.
- Political interference should be eliminated. Local leaders may be allowed to guide the people but in no way should be allowed to force the bank officials to lend loans according to their desire.
- Efforts should be made to recover loans well in time.
- The persuasive method of recovery should be followed satisfactorily.
- The top management should also review periodically the sticky accounts and take suitable steps before the situations gets out of control.
- Coercive legal actions should be taken against willful defaulter under section 117 and 118 of Jaipur Central Co-operative Societies Act, 1965, so that other do not make them a pretext for their non- payment of loans.
- Government should also think of various legislative measures to punish severely, including imprisonment, the unscrupulous borrowers whose sole intention is to cheat the banks and the public financial institutions.
- The conversion facility is aimed to give relief agriculturists at the time of natural

calamity, but some time it gives shelter to big farmers and willful defaulters. Hence, the management of the Bank should be careful in utilizing the conversion facility.

- There is a definite relationship between drought conditions and increase in over dues of the Banks. Therefore, it is suggested that Dry Land Farming Techniques must be developed in all states.
- The Crop Loan Insurance Scheme, started by the Central Government, was very appropriate in present conditions. But the scheme was postponed after the year 1986-87, it should be continued again.
- Untimely disbursement of loans on personal bias should be minimized to the extent possible.
- Recovery-drives should be organized to coincide with harvests.
- Misuse of loans should be restricted.
- The bank should adopt a proper planning and attempt to solve it in that perspective.
- Moreover, the banks should also make continuous search for profitable avenues of business.
- Special campaigns like deposit mobilization weak and deposit camps should be organized with wide publicity at the appropriate time of harvesting and marketing of crops.

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## IMPACT OF MERGERS AND ACQUISITION (M&A) : A STUDY ON PRE AND POST MERGER PERFORMANCE OF SELECTED BANKS IN INDIA

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### Abstract

The present study examines the impact of mergers and acquisitions (M&A) on the financial efficiency of the selected Banking Sector in India. Since 1999 the Indian Banking Scenario has witnessed a Phenomenal changes due to the globalization concept. To withstand the competitions from the MNC's in the global markets, many Indian companies have entered in to the M&A deals. The banking sector is considered as booming sector and the soundness of the banking system has been vital for the development of the country's economy. Hence an attempt is made in this study to analyze the impact of the pre and post Merger and Acquisition performances of select banks in India. The evaluation of performance were measured by using the ratio analysis. The M&A deals in banking companies that took place prior (Pre-merger) and after the deal (post-merger) ie., between 2004 - 2012 were taken for the study. The average performance of three years Pre- Merger and Post-Merger period were taken for the analysis. The main focus was based on the Overall Profitability parameters, Liquidity parameters, Solvency parameters. We found that there is no significant change in the Net profit margin of the Banking company, there is a significant change in liquidity position, and there is no significant change in the Long term Solvency position of these Banks. The results of the study indicate that M&A shows a significant improvement in the financial performance during the Post-Merger period of the Banking companies involved in M&A deal, and the acquiring firms were able to generate additional values in the post M&A periods.

**Keywords:** M &A, Profitability, Liquidity, Solvency Parameters, Paired T-test.

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### Introduction

The main objective of any company is to have a stable growth of enterprise to maximize the wealth of its shareholder. Further to achieve profitable growth of business it is necessary for any company to limit competition, create synergy effect, for entering in to new markets and geographies, for improving competitiveness of companies through gaining greater market share, reduce the operating cost, broadening the portfolio to reduce the business risk, to gain economies of scale and increase in income with proportionally less investment, to access foreign market, to achieve diversification and utilize underutilized market opportunities. Companies are confronted with the facts that the only big players can survive as there is a cut throat competition in the market and the success of the merger depends on how well the two companies integrate themselves in carrying out day to day operations. The present study is aimed to study the financial performance of acquiring banks, by examining some Pre-Merger and Post-Merger financial ratios with the sample of 7 Public sector banks and 3 Private sector banks in India.

For better understanding, we can divide the period of performance of the Banking sector into two, the pre liberalization and the post liberalization era. In pre liberalization era government of India nationalized 14 banks on 19 July 1969 and later on 6 more commercial banks were nationalized on 15th April 1980 making into 20 nationalized banks as on that date. In the year 1993 government merged The New Bank of India and The Punjab National Bank and this was the only merger between nationalized Banks, after that the numbers of nationalized banks reduced from 20 to 19 (The SBI & its associate Banks are considered as One UNIT). In post liberalization regime, government had initiated the policy of liberalization and licenses were issued to the private sector which lead to the phenomenal growth of Indian Banking sector.<sup>1</sup>

The Indian Banking Industry was not affected much on account of this crisis due to the cautious economic policies of the RBI. The Indian Banking Industry is having far better position than it was at the time of crisis. Government has taken various initiatives to strengthen the financial system. The economic recovery gained strength on the back of a variety of monetary policy initiatives taken by the Reserve Bank of India. All the entities which opt for M&A deal are required to adopt the norms of RBI and its guidelines to complete the process. The latest merger and acquisition deal was between Kotak Mahindra Bank and I N G Vysya Bank Ltd which took place on 20th November 2014 (in the Private Sector). The consolidated list of M&A deal that took place between 1999 to 2014 are as under:

#### **List of Merger and Acquisition (M &As) in Indian Banking Industry Since Post Liberalization Regime**

| S.N | Date of Merger | Acquirer Company    | Target Company                  |
|-----|----------------|---------------------|---------------------------------|
| 1   | 26-Nov-99      | HDFC BANK LTD       | Times Bank Ltd                  |
| 2   | 1-Dec-99       | UNION BANK OF INDIA | Sikkim Bank Ltd                 |
| 3   | 16-Dec-99      | ICICI BANK LTD      | Centurion Bank Of Punjab Ltd    |
| 4   | 21-Dec-99      | FEDERAL BANK LTD    | Fedbank Financial Services Ltd. |

|    |           |                                          |                                         |
|----|-----------|------------------------------------------|-----------------------------------------|
| 5  | 7-Jun-00  | Royal Bank Of Scotland N V               | R B S Corporate Finance India Pvt. Ltd. |
| 6  | 6-Sep-00  | HDFC Ltd                                 | Hometrust Housing Finance Co. Ltd       |
| 7  | 11-Dec-00 | ICICI BANK LTD                           | Bank Of Madura Ltd                      |
| 8  | 5-May-01  | ALLAHABAD BANK                           | Allbank Finance Ltd.                    |
| 9  | 20-Oct-01 | Bank Of Baroda                           | Benares State Bank Ltd                  |
| 10 | 25-Oct-01 | ICICI BANK LTD                           | I C I C I Ltd                           |
| 11 | 25-Oct-01 | ICICI BANK LTD                           | I C I C I Capital Services Ltd          |
| 12 | 21-Mar-02 | ANDHRA BANK                              | Andhra Bank Housing Finance Ltd         |
| 13 | 21-Aug-02 | Standard Chartered Bank - India Branches | Standard Chartered Grindlays Bank Ltd   |
| 14 | 22-Aug-02 | Indusind Bank Ltd.                       | Indusind Enterprises & Finance Ltd      |
| 15 | 18-Sep-02 | BANK OF INDIA                            | B O I Asset Mgmt. Co. Ltd               |
| 16 | 20-Nov-02 | PUNJAB NATIONAL BANK                     | Nedungadi Bank Ltd                      |
| 17 | 27-Aug-03 | PUNJAB NATIONAL BANK                     | P N B Capital Services Ltd              |
| 18 | 2-Dec-03  | Indusind Bank Ltd.                       | Ashok Leyland Finance Ltd               |
| 19 | 26-Jul-04 | Oriental Bank of Commerce                | Global Trust Bank Ltd                   |
| 20 | 17-dec-04 | Corporation Bank                         | Corpbank Homes Ltd                      |
| 21 | 20-Jan-05 | I D B I                                  | I D B I Bank Ltd                        |
| 22 | 5-Oct-05  | FEDRAL BANK LTD                          | Lord Krishna Bank Ltd                   |
| 23 | 6-Jan-06  | FEDRAL BANK LTD                          | Ganesh Bank Of Kurundwad Ltd            |
| 24 | 1-May-06  | Bank of Baroda                           | Bareilly Kshetriya Gramin Bank          |
| 25 | 25-Jul-06 | Bank of Baroda                           | National Bank Ltd.                      |
| 26 | 4-Sep-06  | ICICI BANK LTD                           | United Western Bank Ltd                 |
| 27 | 12-Dec-06 | ICICI BANK LTD                           | Sangli Bank Ltd                         |
| 28 | 7-Apr-07  | INDIAN OVERSEAS BANK                     | Bharat Overseas Bank Ltd                |
| 29 | 26-Aug-07 | STATE BANK OF INDIA                      | State Bank Of Saurashtra                |
| 30 | 25-Feb-08 | HDFC BANK LTD                            | Centurion Bank Of Punjab Ltd            |
| 31 | 25-Jun-08 | STATE BANK OF INDIA                      | S B I Commercial & Intl. Bank Ltd       |
| 32 | 19-Jun-09 | STATE BANK OF INDIA                      | State Bank Of Indore                    |
| 33 | 22-Sep-09 | FEDRAL BANK LTD                          | Catholic Syrian Bank Ltd.               |
| 34 | 19-May-10 | ICICI BANK LTD                           | Bank Of Rajasthan Ltd.                  |
| 35 | 22-Jul-10 | IDBI BANK LTD                            | I D B I Homefinance Ltd                 |
| 36 | 2-Feb-12  | INDIAN BANK                              | Indfund Management Ltd                  |
| 37 | 20-Nov-14 | Kotak Mahindra Bank Ltd.                 | I N G Vysya Bank Ltd                    |

Source: CMIE Prowess Data base.2

### Literature Review

An extensive review of literature has been carried out in order to enhance the level of understanding in the area of mergers to gain insight into the impact of mergers on the financial performance of acquirer banking companies and formulate research problem for further investigation in this area.

### Objectives of the Study

The main objective of the study is to evaluate the pre and post merger financial performance of the acquirer Banking companies listed in BSE and also to offer the findings, suggestion and conclusion.

### Statement of the Problem

Many studies have been conducted to analyse the corporate consolidations like mergers, takeovers, restructuring and corporate controls. The researchers have generally focused on public and corporate policy issues, financial implication and method of valuation. The present study attempts to analyse the financial performance of acquirer of Banking companies listed in BSE in the pre and post merger period.

### Scope of the Study

The study has focused on Merger and Acquisition in Selected Public Sector and Private Sector acquiring banks to analyze the Pre and Post M&A financial performance based on financial ratios and paired t-test analysis.

### Limitation of the Study

- The study shall focus only on a few Select banking companies which opted for M&A deals in India.
- The study has analyzed the performance of the select Banking companies during the Three Years Prior to and Three Years After the M&A deals, which may not provide the true picture of improvements in financial performance on over all basis.

### Research Methodology

In this paper an attempt is made to test the influence of Merger and Acquisition on the financial performance of the acquiring banking company by considering Pre and Post M&A financial ratios for the entire set of sample firms. For the present study relevant financial ratios are identified and categorized under three parameters like Profitability Ratios, Liquidity Ratios and Solvency Ratios. Some of the key ratios have been ascertained and analyzed. The above parameters were further classified into various important ratios.

| No                            | Ratio                    | Description                             | Standard |
|-------------------------------|--------------------------|-----------------------------------------|----------|
| <b>Profitability Standard</b> |                          |                                         |          |
| 1                             | Net Profit Margin (%)    | (Net Profit / Sales)                    | High     |
| 2                             | Return on Equity (%)     | (Equity Earnings / Average Net Worth)   | High     |
| 3                             | Return on Investment (%) | (EBIT / Total Assets)                   | High     |
| <b>Liquidity Standard</b>     |                          |                                         |          |
| 4                             | Current Ratio            | (Current Assets / Current Liabilities)  | 2:1      |
| 5                             | Quick Ratio              | (Quick Assets / Current Liabilities)    | 1:1      |
| <b>Solvency Standard</b>      |                          |                                         |          |
| 6                             | Debt-to-Equity Ratio     | (Long Term Debt / Equity Share Capital) | 1:1      |
| 7                             | Interest Coverage Ratio  | (EBIT / Interest)                       | Low      |

### Ratio Analysis

Ratio is one of the important tools for measuring the financial performance of the business entities. Ratio is the relationship between two number expressed in mathematical form. The ratio can be defined as “ The indicated quotient of two mathematical expression”.<sup>3</sup>

The Significance of these selected ratios are identified and categorized into three groups.

- **Profitability Ratio:** Profitability ratios show a company's overall efficiency and performance. Profitability ratios are used to determine the company's bottom line and its return to its investors. We can divide profitability ratios into two types: Margin (Net Profit Margin) and Returns (ROE, ROI). Ratios. Margin represents the firm's ability to generate attractive profits through Sales at various stages of measurement. Ratios that show returns represents the firm's ability to measure the overall efficiency of the firm in generating returns to its shareholders.
- **Liquidity Ratio:** Liquidity ratios are used to determine a company's ability to pay off its short-term debts obligations. Generally, the higher the value of the ratio, the larger the margin of safety that the company possesses to cover short-term debts. A company's ability to turn short-term assets into cash to cover debts is of the utmost importance when creditors are seeking payment.
- **Solvency Ratio:** Financial leverage are used to measure an enterprise's ability to meet its long-term debt. A higher ratio indicates a greater degree of leverage, and consequently, financial risk. A rising debt-to-equity impels higher interest expenses, and beyond a certain point it may affect a company's credit rating, making it more expensive to raise more debt. Interest Coverage measures the company's ability to meet the interest expense on its debt with its operating income, which is equivalent to its earnings before interest and taxes (EBIT). The higher the ratio, the better the company's ability to cover its interest expense.

#### Research Hypotheses

- **H<sub>0</sub>** : There is no significant difference between the Pre and post merger Profitability, Liquidity and Solvency position of the acquiring banks in India
- **H<sub>1</sub>**: There is a significant difference between the Pre and post merger Profitability, Liquidity and Solvency position of the acquiring banks in India

#### Statistical Tools and Techniques

To analyze the data collected from various sources and to test the hypotheses, various statistical tools and techniques have been applied in this study. Mean, Variance have been applied in this study. Mean and standard deviation were used for descriptive statistics. The hypotheses are tested using Paired Sample t-test, the data has been analyzed with the help of SPSS, MS-Excel and MS-Word.

#### Selection of Sample and Sampling Technique

For the purpose of this study Ten Banking companies (7 Public Sector and 3 Private Sector Banks) have been selected. These Banks have involved in the M&A deal between 2004– 2012. Convenience sampling has been employed to select the sample companies for the study. Such a selection is undertaken as these units represent the sample in a better way and reflect better relationship with the other variables.

#### Data Collection

The relevant information/data have been collected through the secondary sources . The data for three years prior to merger and three years after merger for each acquiring company in the sample have been extracted from the Centre for

Monitoring Indian Economy (CMIE) Prowess Database used, Money Control and AGM reports and other related data sources.

### List of Sample Units

| S. No.                      | List of Acquiring Banks   | Date of Merger | List of Target Banks         |
|-----------------------------|---------------------------|----------------|------------------------------|
| <b>PUBLIC SECTOR BANKS</b>  |                           |                |                              |
| 1                           | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | GLOBAL TRUST BANK LTD        |
| 2                           | CORPORATION BANK          | 17-Dec-04      | CORPBANK HOMES LTD           |
| 3                           | BANK OF BARODA            | 25-Jul-06      | NATIONAL BANK LTD            |
| 4                           | INDIAN OVERSEAS BANK      | 7-Apr-07       | BHART OVERSEAS BANK LTD      |
| 5                           | STATE BANK OF INDIA       | 19-Jun-09      | STATE BANK OF INDORE         |
| 6                           | I D B I                   | 22-Jul-10      | I D B I HOMEFINANCE LTD      |
| 7                           | INDIAN BANK               | 2-Feb-12       | INDFUND MANAGEMENT LTD       |
| <b>PRIVATE SECTOR BANKS</b> |                           |                |                              |
| 8                           | HDFC BANK LTD             | 25-Feb-08      | CENTURION BANK OF PUNJAB LTD |
| 9                           | FEDRAL BANK LTD           | 22-Sep-09      | CATHOLIC SYRIAN BANK LTD     |
| 10                          | ICICI BANK LTD            | 19-May-10      | BANK OF RAJASTHAN LTD        |

### Data Analysis

Pre and Post-Merger performance ratios are computed for the entire set of sample companies, which have gone through Merger and Acquisition during the selected period. The pre and post M&A performance ratios are compared to verify whether there exists any statistically significant changes in the performance of acquirer firm after M&A deal, using “Paired sample t-test” at confidence level of 0.05

#### • Net Profit Margin (NPM) %

| S. No | Name of the Bank          | DATE OF MERGER | 1    | 2    | 3    | AVG  | 1    | 2    | 3    | AVG   |
|-------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1     | STATE BANK OF INDIA       | 19-Jun-09      | 10.1 | 11.8 | 12   | 11.3 | 10.5 | 9.05 | 11   | 10.19 |
| 2     | FEDRAL BANK LTD           | 22-Sep-09      | 13.9 | 12.8 | 13.1 | 13.3 | 10.8 | 14.5 | 14   | 13.08 |
| 3     | ICICI BANK LTD            | 19-May-10      | 10.5 | 9.74 | 12.3 | 10.8 | 19.8 | 19.3 | 20.8 | 19.96 |
| 4     | INDIAN OVERSEAS BANK      | 7-Apr-07       | 14.3 | 16.4 | 16.2 | 15.6 | 14.4 | 12.2 | 6.25 | 10.93 |
| 5     | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 9.23 | 12   | 17.2 | 12.8 | 19.4 | 12.5 | 15.4 | 15.78 |
| 6     | I D B I BANK LTD          | 22-Jul-10      | 7.84 | 6.71 | 5.95 | 6.83 | 8.9  | 8.69 | 7.5  | 8.363 |
| 7     | HDFC BANK LTD             | 25-Feb-08      | 15.6 | 13.6 | 12.9 | 14   | 11.4 | 14.8 | 19.7 | 15.27 |
| 8     | CORPORATION BANK          | 17-Dec-04      | 13.5 | 16.3 | 19.1 | 16.3 | 16.4 | 14.9 | 14   | 15.09 |
| 9     | INDIAN BANK               | 2-Feb-12       | 17   | 18.3 | 14.3 | 16.5 | 11.4 | 7.6  | 6.34 | 8.44  |
| 10    | BANK OF BARODA            | 25-Jul-06      | 12.4 | 9.77 | 16   | 12.7 | 12.9 | 10.9 | 10.2 | 11.33 |
|       | AVERAGE OF AVERAGE        |                |      |      |      | 13   |      |      |      | 12.84 |

#### Paired Samples Statistics

|        |                 | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|-----------------|---------|----|----------------|-----------------|
| Pair 1 | Net Profit Pre- | 13.0230 | 10 | 2.91516        | 0.92186         |
|        | Post Merger     | 12.8403 | 10 | 3.69397        | 1.16814         |

#### Paired Samples Correlations

|        |                               | N  | Correlation | Sig.  |
|--------|-------------------------------|----|-------------|-------|
| Pair 1 | Net Profit Pre- & Post Merger | 10 | 0.068       | 0.851 |

**Paired Samples Test**

|                                       | Paired Differences |                   |                    |                                              |         | T     | df | Sig.<br>(2-tailed) |
|---------------------------------------|--------------------|-------------------|--------------------|----------------------------------------------|---------|-------|----|--------------------|
|                                       | Mean               | Std.<br>Deviation | Std. Error<br>Mean | 95% Confidence Interval<br>of the Difference |         |       |    |                    |
|                                       |                    |                   |                    | Lower                                        | Upper   |       |    |                    |
| Pair 1 Net Profit Pre-<br>Post Merger | .18270             | 4.54692           | 1.43786            | -3.06997                                     | 3.43537 | 0.127 | 9  | .902               |

**Interpretation**

The average Net Profit Margin before merger is 13% and after merger is 12.84% (slightly reduced.). It indicates that there is no much difference between pre and post merger period performances. The Net Profit Margin shows that the calculated value of t-test is 0.127 and table value is 2.262 at 5% significant level- the calculated value is lower than the table value. So the Null Hypothesis (H<sub>0</sub>) is accepted. Hence there is no significant difference between Pre and Post merger performance of select banks relating to Net Profit Margin.

- Return on Investment (ROI) %**

| S. NO | Name of the Bank          | Date of Merger | 1    | 2    | 3    | AVG  | 1    | 2    | 3    | AVG   |
|-------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1     | STATE BANK OF INDIA       | 19-Jun-09      | 1.54 | 1.74 | 1.75 | 1.68 | 1.46 | 2.23 | 2.47 | 2.053 |
| 2     | FEDRAL BANK LTD           | 22-Sep-09      | 2.29 | 1.98 | 2.49 | 2.25 | 2.3  | 3    | 2.69 | 2.663 |
| 3     | ICICI BANK LTD            | 19-May-10      | 1.4  | 1.3  | 1.41 | 1.37 | 2.35 | 2.36 | 2.61 | 2.44  |
| 4     | INDIAN OVERSEAS BANK      | 7-Apr-07       | 2.07 | 1.76 | 1.92 | 1.92 | 1.88 | 1.89 | 0.84 | 1.537 |
| 5     | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 3.09 | 2.27 | 3.24 | 2.87 | 1.94 | 1.69 | 1.55 | 1.727 |
| 6     | I D B I BANK LTD          | 22-Jul-10      | 0.73 | 0.67 | 1.12 | 0.84 | 1.72 | 1.5  | 1.79 | 1.67  |
| 7     | HDFC BANK LTD             | 25-Feb-08      | 2.01 | 2.91 | 3.19 | 2.7  | 2.26 | 2.21 | 3.09 | 2.52  |
| 8     | CORPORATION BANK          | 17-Dec-04      | 2.88 | 2.42 | 2.72 | 2.67 | 1.86 | 1.75 | 1.69 | 1.767 |
| 9     | INDIAN BANK               | 2-Feb-12       | 2.68 | 2.98 | 2.66 | 2.77 | 2.03 | 1.67 | 1.61 | 1.77  |
| 10    | BANK OF BARODA            | 25-Jul-06      | 2.01 | 1.18 | 1.04 | 1.41 | 1.43 | 1.58 | 1.72 | 1.577 |
|       | AVERAGE OF AVERAGE        |                |      |      |      | 2.05 |      |      |      | 1.972 |

**Paired Samples Statistics**

|                 | Mean   | N  | Std. Deviation | Std. Error Mean |
|-----------------|--------|----|----------------|-----------------|
| Pair 1 ROI Pre- | 2.0480 | 10 | 0.70927        | 0.22429         |
| Post Merger     | 1.9724 | 10 | 0.41935        | 0.13261         |

**Paired Samples Correlations**

|                               | N  | Correlation | Sig. |
|-------------------------------|----|-------------|------|
| Pair 1 ROI Pre- & Post Merger | 10 | .13         | .721 |

**Paired Samples Test**

|                                  | Paired Differences |                   |                    |                                                 |        | t    | df | Sig.<br>(2-tailed) |
|----------------------------------|--------------------|-------------------|--------------------|-------------------------------------------------|--------|------|----|--------------------|
|                                  | Mean               | Std.<br>Deviation | Std. Error<br>Mean | 95% Confidence<br>Interval of the<br>Difference |        |      |    |                    |
|                                  |                    |                   |                    | Lower                                           | Upper  |      |    |                    |
| Pair 1 ROI Pre- - Post<br>Merger | .07560             | .77568            | .24529             | -.47929                                         | .63049 | .308 | 9  | .765               |

**Interpretation**

The average ratio of Return on Investment (ROI) is little lower during the post M&A period when compared with pre M&A period. Moreover the analysis of the of Return on Investment (ROI) shows that the calculated value of t-test is 0.308 and table value is 2.262 at 5% significant level- the calculated value is lower than the table value. So the Null Hypothesis (H<sub>0</sub>) is accepted. Hence there is no significant difference between Pre and Post merger performance of select banks relating to the Return on Investment (ROI).

- Return on Equity (ROE) %**

| S. NO | Name of the Bank          | Date of Merger | 1    | 2    | 3    | AVG  | 1    | 2     | 3     | AVG   |
|-------|---------------------------|----------------|------|------|------|------|------|-------|-------|-------|
| 1     | STATE BANK OF INDIA       | 19-Jun-09      | 14.5 | 13.7 | 15.7 | 14.7 | 13.9 | 11.34 | 13.94 | 13.06 |
| 2     | FEDERAL BANK LTD          | 22-Sep-09      | 19.6 | 9.39 | 11.6 | 13.5 | 9.91 | 11.49 | 13.61 | 11.67 |
| 3     | ICICI BANK LTD            | 19-May-10      | 8.94 | 7.58 | 7.79 | 8.1  | 9.35 | 10.7  | 12.48 | 10.84 |
| 4     | INDIAN OVERSEAS BANK      | 7-Apr-07       | 29.9 | 28.6 | 29.1 | 29.2 | 25.4 | 22.31 | 11.13 | 19.6  |
| 5     | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 20.2 | 24.5 | 28.7 | 24.5 | 24.2 | 13.11 | 10.78 | 16.03 |
| 6     | IDBI BANK LTD             | 22-Jul-10      | 10.7 | 11.5 | 12.5 | 11.6 | 13   | 11.56 | 9.66  | 11.41 |
| 7     | HDFC BANK LTD             | 25-Feb-08      | 22.7 | 23.6 | 13.8 | 20   | 15.3 | 13.7  | 15.47 | 14.83 |
| 8     | CORPORATION BANK          | 17-Dec-04      | 18.2 | 17.3 | 18   | 17.8 | 11.5 | 11.54 | 11.79 | 11.62 |
| 9     | INDIAN BANK               | 2-Feb-12       | 22.8 | 21.1 | 18.5 | 20.8 | 14.8 | 9.81  | 8     | 10.87 |
| 10    | BANK OF BARODA            | 25-Jul-06      | 20.3 | 12.6 | 10.5 | 14.5 | 11.9 | 12.99 | 17.35 | 14.07 |
|       | AVERAGE OF AVERAGE        |                |      |      |      | 17.5 |      |       |       | 13.4  |

**Paired Samples Statistics**

|                 | Mean    | N  | Std. Deviation | Std. Error Mean |
|-----------------|---------|----|----------------|-----------------|
| Pair 1 ROE Pre- | 17.4700 | 10 | 6.31683        | 1.99756         |
| Post Merger     | 13.4540 | 10 | 2.80748        | 0.88780         |

**Paired Samples Correlations**

|                               | N  | Correlation | Sig. |
|-------------------------------|----|-------------|------|
| Pair 1 ROE Pre- & Post Merger | 10 | .788        | .007 |



**Paired Samples Test**

|        |                           | Paired Differences |                   |                       |                                                 |         | t     | Df | Sig.<br>(2-tailed) |
|--------|---------------------------|--------------------|-------------------|-----------------------|-------------------------------------------------|---------|-------|----|--------------------|
|        |                           | Mean               | Std.<br>Deviation | Std.<br>Error<br>Mean | 95% Confidence<br>Interval of the<br>Difference |         |       |    |                    |
|        |                           |                    |                   |                       | Lower                                           | Upper   |       |    |                    |
| Pair 1 | ROE Pre- - Post<br>Merger | 4.01600            | 4.45262           | 1.40804               | .83079                                          | 7.20121 | 2.852 | 9  | .019               |

**Interpretation**

The Return on Equity (ROE) shows that the average rate of ROE during the post M&A period is lower than the pre M&A period. The calculated value of t-test is 2.852 and table value is 2.262 at 5% significant level. The calculated value is more than the table value. Therefore the Alternate Hypothesis (H<sub>1</sub>) is accepted. Hence there is a significant difference between Pre and Post merger performance of select banks with regard to ROE.

**Current Ratio**

| S. NO | Name of the Bank          | Date of Merger | 1    | 2    | 3    | AVG  | 1    | 2    | 3    | AVG   |
|-------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1     | STATE BANK OF INDIA       | 19-Jun-09      | 0.05 | 0.07 | 0.04 | 0.05 | 0.04 | 0.04 | 0.05 | 0.043 |
| 2     | FEDRAL BANK LTD           | 22-Sep-09      | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.023 |
| 3     | ICICI BANK LTD            | 19-May-10      | 0.01 | 0.13 | 0.14 | 0.09 | 0.07 | 0.07 | 0.09 | 0.077 |
| 4     | INDIAN OVERSEAS BANK      | 7-Apr-07       | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.023 |
| 5     | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 0.03 | 0.03 | 0.02 | 0.03 | 0.05 | 0.05 | 0.03 | 0.043 |
| 6     | I D B I BANK LTD          | 22-Jul-10      | 0.05 | 0.04 | 0.03 | 0.04 | 0.02 | 0.03 | 0.03 | 0.027 |
| 7     | HDFC BANK LTD             | 25-Feb-08      | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.06 | 0.043 |
| 8     | CORPORATION BANK          | 17-Dec-04      | 0.05 | 0.04 | 0.06 | 0.05 | 0.04 | 0.03 | 0.03 | 0.033 |
| 9     | INDIAN BANK               | 2-Feb-12       | 0.01 | 0.01 | 0.02 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03  |
| 10    | BANK OF BARODA            | 25-Jul-06      | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 | 0.03 | 0.02 | 0.03  |
|       | AVERAGE OF AVERAGE        |                |      |      |      | 0.04 |      |      |      | 0.037 |

**Paired Samples Statistics**

|                                          | Mean    | N  | Std. Deviation | Std. Error Mean |
|------------------------------------------|---------|----|----------------|-----------------|
| Pair 1 Current Ratio Pre-<br>Post Merger | 0.04060 | 10 | 0.022770       | 0.007201        |
|                                          | 0.03720 | 10 | 0.016033       | 0.005070        |

**Paired Samples Correlations**

|                                            | N  | Correlation | Sig. |
|--------------------------------------------|----|-------------|------|
| Pair 1 Current Ratio Pre- & Post<br>Merger | 10 | .841        | .002 |

**Paired Samples Test**

|        |                                     | Paired Differences |                   |                    |                                                 |          | T     | df | Sig.<br>(2-tailed) |
|--------|-------------------------------------|--------------------|-------------------|--------------------|-------------------------------------------------|----------|-------|----|--------------------|
|        |                                     | Mean               | Std.<br>Deviation | Std. Error<br>Mean | 95% Confidence<br>Interval of the<br>Difference |          |       |    |                    |
|        |                                     |                    |                   |                    | Lower                                           | Upper    |       |    |                    |
| Pair 1 | Current Ratio Pre-<br>- Post Merger | 0.003400           | 0.012712          | 0.004020           | -.005694                                        | 0.012494 | 0.846 | 9  | 0.420              |

**Interpretation**

The Standard Current ratio is 2:1. Before merger the average current ratio is 0.04: 1 and after merger the average current ratio is 0.037: 1. The adequate amount of current assets must be raised to meet the short term obligation. The Current Ratio shows that the Calculated value of t-test is 0.0127 and table value is 2.262 at 5% significant level, which is lower than the table value. So the Null Hypothesis (H<sub>0</sub>) is accepted. Hence there is no significant difference between Pre and Post merger performance of select banks with regard to Current Ratio.

**Quick Ratio**

| S. N | Name of the Bank          | Date of Merger | 1    | 2    | 3    | AV G | 1    | 2    | 3    | AV G  |
|------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1    | STATE BANK OF INDIA       | 19-Jun-09      | 6.52 | 6.15 | 5.74 | 6.14 | 9.07 | 8.5  | 12.2 | 9.907 |
| 2    | FEDRAL BANK LTD           | 22-Sep-09      | 13.6 | 11.7 | 16   | 13.8 | 21.7 | 24.8 | 24   | 23.49 |
| 3    | ICICI BANK LTD            | 19-May-10      | 6.42 | 5.94 | 14.7 | 9.02 | 15.9 | 16.7 | 10.5 | 14.37 |
| 4    | INDIAN OVERSEAS BANK      | 7-Apr-07       | 8.97 | 8    | 8.07 | 8.35 | 11.3 | 11.5 | 23.6 | 15.46 |
| 5    | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 11.3 | 14.1 | 11.8 | 12.4 | 15.8 | 15   | 13.9 | 14.91 |
| 6    | IDBI BANK LTD             | 22-Jul-10      | 9.07 | 19   | 19.5 | 15.8 | 26.8 | 29.1 | 24.8 | 26.89 |
| 7    | HDFC BANK LTD             | 25-Feb-08      | 5.18 | 4.07 | 4.89 | 4.71 | 5.23 | 7.14 | 6.89 | 6.42  |
| 8    | CORPORATION BANK          | 17-Dec-04      | 11   | 10.4 | 7.56 | 9.64 | 9.3  | 10.5 | 9.58 | 9.78  |
| 9    | INDIAN BANK               | 2-Feb-12       | 17.9 | 19.5 | 20.1 | 19.2 | 19.4 | 21.7 | 22.7 | 21.27 |
| 10   | BANK OF BARODA            | 25-Jul-06      | 6.86 | 8.28 | 9.49 | 8.21 | 11.3 | 9.56 | 9.62 | 10.16 |
|      | AVERAGE OF AVERAGE        |                |      |      |      | 10.7 |      |      |      | 15.27 |

**Paired Samples Statistics**

|        |                  | Mean    | N  | Std. Deviation | Std. Error Mean |
|--------|------------------|---------|----|----------------|-----------------|
| Pair 1 | Quick Ratio Pre- | 10.7370 | 10 | 4.52301        | 1.43030         |
|        | Post Merger      | 15.2657 | 10 | 6.69083        | 2.11583         |

**Paired Samples Correlations**

|        |                                | N  | Correlation | Sig. |
|--------|--------------------------------|----|-------------|------|
| Pair 1 | Quick Ratio Pre- & Post Merger | 10 | .857        | .002 |

**Paired Samples Test**

|                                           | Paired Differences |                   |                    |                                                 |         | T     | df | Sig.<br>(2-tailed) |
|-------------------------------------------|--------------------|-------------------|--------------------|-------------------------------------------------|---------|-------|----|--------------------|
|                                           | Mean               | Std.<br>Deviation | Std. Error<br>Mean | 95% Confidence<br>Interval of the<br>Difference |         |       |    |                    |
|                                           |                    |                   |                    | Lower                                           | Upper   |       |    |                    |
| Pair 1 Quick Ratio Pre - -<br>Post Merger | 4.52870            | 3.65576           | 1.15605            | 7.14387                                         | 1.91353 | 3.917 | 9  | .004               |

**Interpretation**

The Standard Quick Ratio is 1:1. Before merger the average quick ratio is 10.7: 1 and after merger the average quick ratio is 15.27: 1. This indicates the existences of excess level of quick assets and such surplus quick assets may be utilized for long run operations. The Quick Ratio shows that the calculated value of t-test is 3.917 and table value is 2.262 at 5% significant level. The calculated value is more than the table value. Therefore the Alternate Hypothesis (H<sub>1</sub>) is accepted. Hence there is a significant difference between Pre and Post merger performance of select banks with regard to Quick Ratio.

**Debt-Equity Ratio (DTR)**

| S. N0 | Name of the Bank          | Date of Merger | 1    | 2    | 3    | AVG  | 1    | 2    | 3    | AV G  |
|-------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1     | STATE BANK OF INDIA       | 19-Jun-09      | 1.27 | 1.05 | 0.93 | 1.08 | 1.56 | 1.84 | 1.52 | 1.64  |
| 2     | FEDRAL BANK LTD           | 22-Sep-09      | 0.51 | 0.2  | 0.17 | 0.29 | 0.33 | 0.37 | 0.74 | 0.48  |
| 3     | ICICI BANK LTD            | 19-May-10      | 1.4  | 1.35 | 1.83 | 1.53 | 1.99 | 2.32 | 2.18 | 2.163 |
| 4     | INDIAN OVERSEAS BANK      | 7-Apr-07       | 0.24 | 0.24 | 0.75 | 0.41 | 1.34 | 1.1  | 1.41 | 1.283 |
| 5     | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 0.38 | 0.36 | 0.26 | 0.33 | 0.22 | 0.17 | 0.11 | 0.167 |
| 6     | I D B I BANK LTD          | 22-Jul-10      | 5.68 | 5.97 | 5.97 | 5.87 | 4.07 | 3.04 | 3.38 | 3.497 |
| 7     | HDFC BANK LTD             | 25-Feb-08      | 0.86 | 0.44 | 0.39 | 0.56 | 0.18 | 0.6  | 0.57 | 0.45  |
| 8     | CORPORATION BANK          | 17-Dec-04      | 0.7  | 0.34 | 0.34 | 0.46 | 0.42 | 0.49 | 0.8  | 0.57  |
| 9     | INDIAN BANK               | 2-Feb-12       | 0.14 | 0.25 | 0.51 | 0.3  | 0.26 | 0.43 | 0.21 | 0.3   |
| 10    | BANK OF BARODA            | 25-Jul-06      | 0.17 | 0.29 | 0.61 | 0.36 | 0.13 | 0.36 | 0.44 | 0.31  |
|       | AVERAGE OF AVERAGE        |                |      |      |      | 1.12 |      |      |      | 1.086 |

**Paired Samples Statistics**

|                                               | Mean   | N  | Std. Deviation | Std. Error Mean |
|-----------------------------------------------|--------|----|----------------|-----------------|
| Pair 1 Debt- Equity Ratio Pre-<br>Post Merger | 1.1196 | 10 | 1.71822        | .54335          |
|                                               | 1.0860 | 10 | 1.07606        | .34028          |

**Paired Samples Correlations**

|                                                 | N  | Correlation | Sig. |
|-------------------------------------------------|----|-------------|------|
| Pair 1 Debt- Equity Ratio Pre- & Post<br>Merger | 10 | .895        | .000 |

### Paired Samples Test

|                                                    | Paired Differences |                |                 |                                           |        | T    | df | Sig. (2-tailed) |
|----------------------------------------------------|--------------------|----------------|-----------------|-------------------------------------------|--------|------|----|-----------------|
|                                                    | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        |      |    |                 |
|                                                    |                    |                |                 | Lower                                     | Upper  |      |    |                 |
| Debt- Equity<br>Pair 1 Ratio Pre- - Post<br>Merger | .03360             | .89440         | .28283          | -.60622                                   | .67342 | .119 | 9  | .908            |

### Interpretation

The Standard Debt-Equity Ratio is 1:1. Before merger the Debt-Equity ratio is 1.12: 1 and after merger the ratio is 1.086: 1. The Debt-Equity ratio is considerably reduced when we compare this with the pre merger period. It indicates the positive sign. The ratio shows that the calculated value of t-test is 0.119 and table value is 2.262 at 5% significant level. The calculated value is lower than the table value. So the Null Hypothesis (H<sub>0</sub>) is accepted. Hence there is no significant difference between Pre and performance of select banks relating to the Debt-Equity Ratio.

### Interest Coverage Ratio

| S. N | Name of the Bank          | DATE OF MERGER | 1    | 2    | 3    | AVG  | 1    | 2    | 3    | AVG   |
|------|---------------------------|----------------|------|------|------|------|------|------|------|-------|
| 1    | STATE BANK OF INDIA       | 19-Jun-09      | 1.37 | 0.37 | 1.36 | 1.03 | 0.33 | 0.54 | 0.52 | 0.463 |
| 2    | FEDRAL BANK LTD           | 22-Sep-09      | 0.5  | 0.36 | 0.47 | 0.44 | 0.44 | 0.64 | 0.43 | 0.503 |
| 3    | ICICI BANK LTD            | 19-May-10      | 1.25 | 0.25 | 0.33 | 0.61 | 0.57 | 0.48 | 0.52 | 0.523 |
| 4    | INDIAN OVERSEAS BANK      | 7-Apr-07       | 1.44 | 1.43 | 0.34 | 1.07 | 0.32 | 0.16 | 0.38 | 0.287 |
| 5    | ORIENTAL BANK OF COMMERCE | 26-Jul-04      | 1.46 | 1.38 | 1.69 | 1.51 | 1.49 | 1.41 | 1.32 | 1.407 |
| 6    | I D B I BANK LTD          | 22-Jul-10      | 1.13 | 1.1  | 1.18 | 1.14 | 0.3  | 0.22 | 0.28 | 0.267 |
| 7    | HDFC BANK LTD             | 25-Feb-08      | 1.87 | 1.9  | 0.79 | 1.52 | 0.44 | 0.63 | 0.88 | 0.65  |
| 8    | CORPORATION BANK          | 17-Dec-04      | 1.5  | 1.5  | 1.66 | 1.55 | 1.58 | 1.51 | 1.41 | 1.5   |
| 9    | INDIAN BANK               | 2-Feb-12       | 1.56 | 0.63 | 0.45 | 0.88 | 0.34 | 0.28 | 0.28 | 0.3   |
| 10   | BANK OF BARODA            | 25-Jul-06      | 1.48 | 1.33 | 1.31 | 1.37 | 1.37 | 0.35 | 1.37 | 1.03  |
|      | AVERAGE OF AVERAGE        |                |      |      |      | 1.11 |      |      |      | 0.693 |

### Paired Samples Statistics

|                               | Mean   | N  | Std. Deviation | Std. Error Mean |
|-------------------------------|--------|----|----------------|-----------------|
| Pair 1 Interest Coverage Pre- | 1.1120 | 10 | .38729         | .12247          |
| Post Merger                   | 0.6930 | 10 | .45888         | .14511          |

### Paired Samples Correlations

|                                                  | N  | Correlation | Sig. |
|--------------------------------------------------|----|-------------|------|
| Pair 1 Interest Coverage Ratio Pre & Post Merger | 10 | .647        | .043 |

**Paired Samples Test**

|        |                                      | Paired Differences |                |                 |                                           |        | t     | df | Sig. (2-tailed) |
|--------|--------------------------------------|--------------------|----------------|-----------------|-------------------------------------------|--------|-------|----|-----------------|
|        |                                      | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        |       |    |                 |
|        |                                      |                    |                |                 | Lower                                     | Upper  |       |    |                 |
| Pair 1 | Interest Coverage Pre- - Post Merger | .41900             | .36127         | .11424          | .16056                                    | .67744 | 3.668 | 9  | .005            |

**Interpretation**

The Standard Interest Coverage ratio is low. Before merger the Interest Cover ratio is 1.11 and after merger the ratio is 0.693. The ratio is considerably reduced when we compare to before merger. It indicates the positive sign. The ratio shows that the Calculated value of t-test is 3.668 and table value is 2.62 at 5% significant level. The calculated value is more than the table value. Therefore the Alternate Hypothesis (H1) is accepted. Hence there is a significant difference between Pre and Post merger performance of select banks with regard to Interest Coverage Ratio.

**t-test analysis - Financial ratios**

| S.No. | Ratio                   | Mean (D) | S.D     | Tc     | Tt    | Result |
|-------|-------------------------|----------|---------|--------|-------|--------|
| 1     | Net Profit Margin       | 0.18270  | 4.54000 | 1.2700 | 2.262 | H0     |
| 2     | ROI                     | 0.07560  | 0.77568 | 0.3080 | 2.262 | H0     |
| 3     | ROE                     | 4.01600  | 4.45262 | 2.8520 | 2.262 | H1     |
| 4     | Current Ratio           | 0.00340  | 0.12700 | 0.8460 | 2.262 | H0     |
| 5     | Quick Ratio             | 4.52870  | 3.65576 | 3.9170 | 2.262 | H1     |
| 6     | Debt-Equity Ratio       | 0.03360  | 0.89440 | 0.1190 | 2.262 | H0     |
| 7     | Interest Coverage Ratio | 0.41900  | 0.36127 | 3.6680 | 2.262 | H1     |

Source: Data compiled from financial statement of Banks retrieved from <http://www.moneycontrol.com/stockmarket>.

**Findings**

The results of the Paired t-test analysis conducted on the performance during the pre and post merger M&A period indicate some interesting facts. As far as Return on Equity (ROE), Quick ratio and Interest coverage ratios are concerned the study reveals that there is a significant difference during the post merger period and hence the Alternative Hypothesis (H1) is accepted. With regard to the results of paired t-test relating to Net Profit Margin, Return on Investment (ROI), Current ratio and Debt-Equity ratios the study reveals that there is no significant difference during the post merger period. Hence the Null Hypothesis (H0) is accepted.

**Suggestions**

The above ratio analysis indicates the strength and weakness of the company. The strength is adequate debt-equity mix, the Quick ratio indicates above the standard level which may be beneficial for the long run operation. The Interest Coverage ratio has considerably reduced when we compare to pre merger period. It indicates the positive sign and need to maintain the same level. The weakness is the

very low current ratio. It indicates the dangerous position. Therefore more concentration is required on this area and needs to improve and maintain the adequate level of current assets to meet the current obligation. At the same time the Quick Ratios reveal that the quick assets are above the standard level. Hence the surplus funds may be better utilized in a most productive manner either within or outside the concern to an optimum level.

### **Conclusion**

This paper has made an attempt to analyse and measure the financial performance of the select banks before and after M&A deals that took place between 2004 and 2012. The evaluations of the financial performance based on the Ratio Analysis Parameters, by using Paired t-test reveals that there is a significant improvement in the overall performance of the banks during the post merger period though there are some fluctuations in certain areas like Return on Investment (ROE), Quick ratio and Interest coverage ratio in the midst of the Globalised competitive conditions. Therefore it is concluded that there is a positive impact on the overall performance of the banking sector in the post M&A period.

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## EXAMINING THE IMPACT OF DIVERSIFICATION STRATEGY ON THE PROFITABILITY OF ITC LTD: A COMPARATIVE STUDY

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### Abstract

Diversification is a buzzing word in the modern business world. It is the growth strategy in which a business ventures into new product line and or markets. A through survey of literature on this issue reveals that this strategy along with its effects has been studied by many researchers, but negligible importance has been given to Indian Corporate sector. In India, ITC Ltd can be recognized as one of the biggest and most successful conglomerate, whose diversification has been a prime strategy of growth. The present study is a modest attempt to analyze the impact of diversification on the profit earning capability of ITC Ltd using the data from 1994-95 to 2013-14. The entire period of study has been divided into two halves. 1994-95 to 2003-04 has been taken as the pre-diversification period and 2004-05 to 2013-14 has been considered as the post-diversification period. The outcome of the study reveals that the company under study out-performed in the post-diversification period as compared to the pre-diversification period in terms of profitability.

**Keywords:** GPR, NPR, OPR, ROCE, RONW, ITC, Diversification, Profitability.

### Introduction

In an ever changing environment where we struggle to survive and grow, dynamism is an essentiality. To be noted that every company passes through five stages in its life, which are emergence, growth, maturity, regeneration and decline (James, 1973). If a company wants to delay the last phase one has to adapt growth strategy otherwise it cannot survive in today's cut-throat competition. A company that fails to grow will be driven out of the market by the overactive new entrants. A growing company enjoys certain advantages like economies of large-scale operation, government concessions, shareholders cooperation and creditors support. Growth also motivates managers who are achievement seekers and it also provides

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satisfaction to the employees by way of opening promotional avenues. A company also acquires prestige in the society while growing. Growth thus provides multi-dimensional evolution. Diversification is one out of many growth strategies.

### **Defining Diversification**

The term 'diverse' means various and hence, it can be said that 'diversification' refers to variety. Variety indicates different, discrete, separate etc. Different authors have defined diversification in their own ways. Ansoff (1957, 1965) defined 'diversification' as the entry of firms into new markets with new products. Rumelt (1974) stated that "Diversification move is an entry into new product market activity that requires or implies an appreciable increase in the available managerial competence within the firm". Diversification, in fact, is the extent to which firms operate in different business simultaneously (Pitts and Hopkins, 1982). It represents an increase in the number of industries in which the firm operates (Berry C.,1975). However, a very comprehensive definition is given by Booz, et.al (1985) which includes the objectives, the direction as well as the means to achieve the diversification. To them, diversification as a means of spreading the base of a business to achieve growth and reduce overall risk by including all investments except those supporting the competitiveness of the existing business directly. Further, they stated, diversification can be in the form of any investment in relation to new product or products, services, customer segments or geographic markets. Besides this, the task of diversification can be achieved by any of the methods including internal development, acquisitions, joint ventures, licensing agreement etc.

### **Survey of Existing Literature**

**Rumelt (1974)** in a study examined a sample of 246 Fortune 500 firms. The study was considered a remarkable contribution to the measurement of diversification. Firstly, the study developed a nine-category measure of diversification strategy and secondly, a statistical linkage between economic performance and diversification strategy was established in the study. The classification given by Wrigley (1970) were: i) Single business (if 95% or more of annual sales came from one end product) ii) Dominant business( if 70 to 94% of sales came from one end product) iii) Related Business (if less than 70 % of sales came from one end product business and diversification was primarily in concentrically related product)iv) unrelated business (if less than 70 % of annual sales were from one end product and diversification was unrelated to the primary product). Rumelt in his study further divided dominant business into Dominant Constrained (DC), Dominant Linked(DL), Dominant Vertical(DV) and Dominant Unrelated(DU). Related business was also segregated into Related Constrained (RC) and Related Linked (RL) and finally unrelated business was sub-divided into unrelated passive and acquisitive conglomerate. Classification was based on the proportion of sales of each product to the total sales of a company. Further, two specialization ratios, namely, Related Ratio and Vertical Ratio were introduced. The study examined the impact of diversification on performance. It was found that among the nine categories seven could be segregated into high, medium and low performers and that DC and RC who were categorized as high performers diversified based on their core skills and were able to



have more opportunities of market segmentation and product diversification. In short, related firms outperformed unrelated business firms. The benchmark finding of the study was that the corporate profitability differed significantly across groups of firms following different diversification strategy. However the study also pointed out that the market structure variable might have influenced the findings.

A critical analysis of the past research was done by **Datta, Nandini, & Rasheed (1991)** on diversification and performance relationship from the theoretical aspect and the study showed that the moderating impact of organisational variables and industrial structure on the performance had been hardly explored. The study identified that there was a clear need to integrate the process through which diversification was achieved with the degree or type of diversification. From methodical point of view, problem was identified in the use of cross-sectional data. Secondly, to support the contingency perspective as suggested in the theoretical framework, it was necessary to look for non-linearity before accepting linear models for testing moderating variables. It was also felt necessary to test both the form and strength of contingency relationship.

A study by **Chang (2007)** with a sample of 115 Asia-Pacific Multinational enterprises showed the effect of internationalization, expansion speed, geographic scope and product diversification on the performance of emerging market MNEs over the period of 1998-2002. The results indicated that the firm performance and internationalization were non-linearly associated. It was also found that moderate product diversification, foreign expansion speed, and geographic scope could increase the capacities of MNEs to exploit market opportunities by engaging in foreign activities. However, it was believed that heavy product and geographic diversification would negatively affect the firm performance of the MNEs.

**Patrick (2012)** in his study with a sample of Nigerian manufacturing firms, studied the impact of product diversification on their performance during the period 2006 to 2010. The results revealed that increase in size resulted in product diversification by manufacturing firms. It was observed that diversified firms had a higher ROA. Ownership structure was found to be negatively but significantly related to performance, which indicated that lesser decisions of diversification would be taken with the increase in number of shareholders. Last but not the least, leverage was found to be positively and significantly associated with performance, which meant that total debt level might influence diversification decisions and thus improve performance.

A study conducted with a sample of US Fortune 500 firms for the period from 1996 to 2003, by **Su and Tsang (2014)** came up with the observations that the secondary stakeholders played a positive moderating role in the association between product diversification and financial performance and this moderating influence gained strength in case of unrelated diversification in comparison to related diversification. Hence, it was suggested that it was beneficial if firms would maintain association with different secondary stakeholder scopes, proportionate with their product diversification levels, to improve financial performance.

### **Objectives of the Study**

The main objective of the study is to determine the impact of diversification strategy on the profitability of ITC Ltd by conducting a comparative study in the pre and post diversification periods. The present study has the following objectives:

- To examine the impact of diversification strategy on profitability with the help of rank analysis of the selected profitability indicators.
- To assess the trends of the selected profitability indicators in both the pre-diversification and post-diversification periods.

### **Research Methodology of the Study**

This study is mainly analytical and examining in nature. This study focuses on the examination of the profitability of the selected company in Indian corporate sector.

- **Sample Design and Source of Data Collection**

In the present study giant Indian Conglomerate, ITC Ltd has been selected as sample. In this study purposive sampling procedure was followed. The data used in the present study was collected from the secondary sources i.e. published annual reports of the ITC Ltd.

- **Period of Study**

In the present study, 1994-95 to 2013-14 has been considered as the period of study where, 1994-95 to 2003-04 has been considered as the pre diversification period and 2004-05 to 2013-14 has been chosen as the post diversification period. During the initial years of the former period, i.e. 1994-95 to 2003-04, ITC adopted the strategy of refocusing or anti diversification. Hence the period can be justifiably called the pre-diversification period. Although ITC started to diversify into a foray of products since 2000, its impact could not be reflected in its financial performance immediately because the diversification strategy was implemented step by step taking a few more years, as such 2004-05 has been considered as the initial year of post-diversification period, up to the recent past i.e. 2013-14. Attempt has been made to conduct a comparative analysis of the profitability position of the selected company in the pre-diversification i.e. 1994-95 to 2003-04 and the post-diversification period i.e. 2004-05 to 2013-2014.

- **Analysis of Data**

For measuring profitability and its company specific components of the selected company, appropriate measures of financial statement analysis and statistical measures were used. analyzing the computed values of profitability, statistical techniques like linear trend analysis and rank analysis were made. Statistical test 't' was used to test the slope of the trend lines

### **Findings of the Study**

The present study has been conducted with the help of two tables. Profitability ratios such as, gross profit ratio, net profit ratio, operating profit ratio, return on capital employed and return on net worth were selected as the profitability indicators. Attempts were made in Table-1 to comparatively analyze the impact of diversification on the profitability with the help of rank.

In Table 1, attempt was made to analyze the impact of diversification on the profitability of ITC Ltd with the help of comprehensive rank test. The values of the selected profitability indicators were considered over the stretch of twenty years segregated into pre-and post-diversification periods. The test was conducted in three steps. Firstly, all the profitability ratios i.e. GPR, NPR, OPR, ROCE and RONW were ranked. In this table, R1, R2, R3, R4 and R5 are the ranks of GPR, NPR, OPR, ROCE and RONW respectively. Secondly, the sum of the ranks of the profitability ratios for each year was ascertained and lastly, the ultimate ranking was done on the principle that lower the sum of the ranks the more favourable was the profitability position of the company in the respective year. Considering the position of the top ten ranks, whether they found place in the pre-diversification period or post-diversification era, conclusions were drawn regarding the influence of diversification strategy on ITC's earning capability. In Table 2 linear trend lines were fitted to the series of the selected profitability indicators to measure their trends in both the pre-diversification and post-diversification periods of the company. To examine whether the slopes of the trend lines were statistically significant or not, 't' test was used

**Gross Profit Ratio (GRP)**

It shows the relationship of gross profit to net sales in terms of percentage. It measures the efficiency of the production operation. A high value of the ratio indicates effective management while a low value reveals inefficient management and unfavourable trends in the form of reduction in selling price not accompanied by reduction in cost of goods or an increase in cost of production

**Net Profit Ratio (NPR)**

This ratio is very useful to the present and prospective investors as it reveals the net earning capability of the concern. It shows the earning left to the equity and preference shareholders as a percentage of net sales. It also reflects the overall efficiency of production, administration, selling and distribution, financing, pricing, tax management etc. The higher the value of the ratio, the better is the firm's capacity of withstanding any unfavourable future condition. A low ratio value, on the other hand, is alarming

**Operating Profit Ratio (OPR)**

This ratio establishes the relationship between operating profit and net sales. It measures the operating profitability of the company. A high value of this ratio is desirable as it indicates efficient managerial ability while a low value is a danger signal.

**Return on Capital Employed (ROCE)**

This ratio indicates the overall earning capability of the company. It also reflects the overall efficiency with which capital is used. It shows the relationship between EBIT (earnings before interest and tax) and the long term funds invested in the business. The higher the value of the ratio, the higher is the overall profitability of the company.

**Return on Net Worth (RONW)**

The ratio expresses the relationship between net profit after tax to the funds invested by the owners. It measures the earning capability of the company from the

view point of its owners. A high value of the ratio is desirable as it signifies efficient utilization of owners' fund.

Table 1 depicts that in case of GPR, OPR and RONW, out of the top ten ranks, five ranks were placed in the pre-diversification period and the other five in the post-diversification. Hence, generally, it can be said that in the case of the above mentioned profitability indicators, diversification strategy did not cast a major impact on the profitability of ITC Ltd. While in case of NPR it was observed that four out of the top ten ranks fell in the pre-diversification period and the rest six ranks were found in the post-diversification period. Again, in ROCE it is noticed that seven out of the top ten ranks were placed in the post-diversification period while only three ranks were found in the pre-diversification period. Thus, it can be concluded that diversification had a major impact on the net profit earning capability as well as the overall profit earning capability of the company under study. Finally on analysis of the ultimate ranks it is observed that 5th, 7th, 9th and 10th ranks were placed in the pre-diversification period while the higher or more desirable ranks like 1st, 2nd, 3rd, 5th and 8th were in the post diversification period. So the net outcome derived from the analysis reflects that definitely diversification strategy had a major impact on the overall profit earning capability of ITC Ltd.

In Table 2 linear trend lines were fitted to the series of the selected profitability indicators of the company to measure their trends in both the pre-diversification and post-diversification periods under study. In this table, the linear trend lines fitted to the GPR series indicated an upward trend in both the pre-diversification and post-diversification periods. However, only in the pre-diversification period the slope was found to be statistically significant. This table shows that the linear trend lines fitted to the NPR series in both the pre- and post-diversification periods disclosed an upward trend. But, only in the pre-diversification period the slope of the trend line was found to be statistically significant. In case of the trend lines fitted to the OPR series a rising trend was observed that in both the pre- and post-diversification periods. However, the slope of the trend line only in the pre-diversification period was found to be statistically significant. Again, the linear trend equations fitted to the ROCE series reflected an upward trend in both the pre- and post-diversification periods but the trend was found to be statistically significant in the pre-diversification period only. Table 2 depicts that the trend line fitted to the RONW series in the pre-diversification period indicated a declining trend which was not found to be statistically significant while an upward trend which was found to be statistically significant at 1 per cent level in the post-diversification period was noticed.

### **Concluding Remarks**

From the study it can be concluded that diversification strategy had a notable impact on the profitability of ITC Ltd. Rank analysis reveals that the company performed better in the post-diversification period compared to its pre-diversification period. Most of the profitability indicators showed a rising trend both in the pre- and post-diversification periods only in case of RONW a negative trend was noticed in the pre-diversification period while a significantly positive trend was observed in the

post-diversification period. Hence, in a nut shell it can be said that diversification strategy had a positive impact on the profitability of the selected company. However, further research needs to be done in this regard to confirm the results of the study.

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**Table 1**  
**Rank Analysis of the Selected Profitability Ratios of ITC Ltd for the Pre- and Post-Diversification Periods**

|                             | Years   | GPR   | R1 | NPR   | R2   | OPR   | R3 | ROCE  | R4 | RONW  | R5 | Sum of ranks | Ultimate ranks |
|-----------------------------|---------|-------|----|-------|------|-------|----|-------|----|-------|----|--------------|----------------|
| <b>PRE-DIVERSIFICATION</b>  | 1994-95 | 38.56 | 20 | 10.98 | 19   | 13.85 | 20 | 23.85 | 20 | 30.61 | 5  | 84           | 18             |
|                             | 1995-96 | 48.37 | 19 | 10.3  | 20   | 17.83 | 19 | 29.24 | 19 | 23.28 | 20 | 97           | 20             |
|                             | 1996-97 | 51.5  | 18 | 11.91 | 18   | 20.92 | 18 | 34.17 | 18 | 25.52 | 16 | 88           | 19             |
|                             | 1997-98 | 53.71 | 13 | 17.11 | 17   | 25.34 | 17 | 34.48 | 17 | 29.86 | 6  | 70           | 15             |
|                             | 1998-99 | 52.79 | 16 | 17.73 | 16   | 27.59 | 16 | 39.96 | 15 | 27.90 | 10 | 73           | 16             |
|                             | 1999-00 | 56.64 | 9  | 19.10 | 15   | 32.08 | 9  | 49.70 | 6  | 28.31 | 9  | 48           | 11             |
|                             | 2000-01 | 60.97 | 1  | 23.93 | 7    | 36.82 | 1  | 45.71 | 11 | 28.47 | 8  | 28           | 5              |
|                             | 2001-02 | 58.62 | 4  | 23.52 | 8    | 33.7  | 3  | 43.41 | 13 | 26.95 | 12 | 40           | 9              |
|                             | 2002-03 | 57.78 | 6  | 23.38 | 9    | 32.67 | 7  | 48.67 | 10 | 25.56 | 15 | 47           | 10             |
| <b>POST-DIVERSIFICATION</b> | 2003-04 | 59.03 | 3  | 24.62 | 5    | 32.75 | 6  | 59.44 | 2  | 24.85 | 17 | 33           | 7              |
|                             | 2004-05 | 59.05 | 2  | 28.69 | 1    | 32.46 | 8  | 53.41 | 4  | 27.75 | 11 | 26           | 2              |
|                             | 2005-06 | 55.03 | 12 | 22.83 | 10   | 30.59 | 11 | 50.01 | 5  | 24.67 | 18 | 56           | 12             |
|                             | 2006-07 | 52.77 | 17 | 21.83 | 13   | 29.05 | 13 | 44.68 | 12 | 25.87 | 14 | 69           | 14             |
|                             | 2007-08 | 52.89 | 15 | 22.37 | 11.5 | 28.43 | 14 | 40.13 | 14 | 25.88 | 13 | 67.5         | 13             |
|                             | 2008-09 | 53.64 | 14 | 21.21 | 14   | 28.00 | 15 | 36.08 | 16 | 23.76 | 19 | 78           | 17             |
|                             | 2009-10 | 57.71 | 7  | 22.37 | 11.5 | 30.28 | 12 | 59.55 | 1  | 28.87 | 7  | 38.5         | 8              |
|                             | 2010-11 | 57.85 | 5  | 23.56 | 6    | 30.81 | 10 | 57.72 | 3  | 31.26 | 4  | 28           | 5              |
|                             | 2011-12 | 57.65 | 8  | 24.85 | 4    | 32.91 | 5  | 48.84 | 8  | 32.79 | 2  | 27           | 3              |
|                             | 2012-13 | 55.86 | 11 | 25.06 | 3    | 33.29 | 4  | 49.38 | 7  | 33.28 | 3  | 28           | 5              |
|                             | 2013-14 | 56.48 | 10 | 26.72 | 2    | 35.18 | 2  | 48.74 | 9  | 33.45 | 1  | 24           | 1              |

Source: Compiled and computed from published Annual Reports of ITC for the period 1994-95 to 2013-14

**Table 2**  
**Trends of the Selected Profitability Measures of ITC in the Pre-diversification and Post-diversification Periods**

|                             | Ratio | Slope     | 't' value |
|-----------------------------|-------|-----------|-----------|
| <b>Pre-diversification</b>  | GPR   | 1.887     | 4.841**   |
|                             | NPR   | 1.783     | 9.513**   |
|                             | OPR   | 2.284     | 5.929**   |
|                             | ROCE  | 3.309     | 7.702**   |
|                             | RONW  | (-) 0.197 | (-) 0.752 |
| <b>Post-diversification</b> | GPR   | 0.158     | 0.618     |
|                             | NPR   | 0.107     | 0.391     |
|                             | OPR   | 0.437     | 1.961     |
|                             | ROCE  | 0.307     | 0.366     |
|                             | RONW  | 1.015     | 4.154**   |

Source: Compiled and computed from published Annual Reports of ITC for the period 1994-95 to 2013-14



## FLOW OF FOREIGN INSTITUTIONAL INVESTMENT IN INDIAN CAPITAL MARKET AND ITS EFFECT ON THE NATIONAL ECONOMY

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### Abstract

Indian Economy is one of the largest economies in the world. The process of liberalization started in the year 1991 and then capital market has been opened for the Foreign Institutional Investors' (FIIs) since the year 1992. From various studies of different authors and researchers it is clear that FII inflows have significant effect on the Indian capital market. But it is required to observe whether the inflows of foreign capital through FIIs have effects on our national economy. This study seeks to observe the flow of foreign institutional investment in the Indian capital market and their effect on to the per capita GDP growth rate of our national economy. For this study, data have been collected from secondary sources and simple statistical tables have been used. The results show that during the study period, i.e. from the year 2001 to 2014, the flow of FII has entered in the Indian Capital Market in a fluctuating manner and that has an effect on per capita annual GDP growth rate of India.

**Keywords:** FIIs, GDP, SEBI, FDI, Foreign Equity, Corporate Governance, Institutional Investors.

### Introduction

Foreign institutional investors (FIIs) are those institutional investors which invest in the assets belonging to a different country other than that where these organizations are based. FII is defined as an institution organized outside of India for the purpose of making investments into the Indian securities market under the regulations prescribed by SEBI. Foreign institutional investors have been playing a very important role in any economy, so Indian economy is not to be the exception. These are the big companies such as investment banks, mutual funds, pension funds, etc. who invest considerable amount of money in the Indian markets. With the buying of securities by these big players, markets trend to move upward and vice-versa. They exert strong influence on the total

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inflows coming into the economy. Market regulator SEBI has over 1700 foreign institutional investors registered with it. The FIIs are considered as both a trigger and a catalyst for the market performance by encouraging investment from all classes of investors which further leads to growth in financial market trends under a self-organized system.

FIIs can invest their own funds as well as invest on behalf of their overseas clients registered as such with SEBI. These client accounts that the FII manages are known as “sub-accounts”. A domestic portfolio manager can also register itself as an FII to manage the funds of sub-accounts. Positive tidings about the Indian economy combined with a fast-growing market have made India an attractive destination for foreign institutional investors. Entry Options For FII-A foreign company planning to set up business operations in India has the following options: Incorporated Entity i.e. by incorporating a company under the Companies Act, through Joint Ventures or Wholly Owned Subsidiaries. Foreign equity in such Indian companies can be up to 100% depending on the requirements of the investor, subject to equity caps in respect of the area of activities under the Foreign Direct Investment (FDI) policy. Institutional investors will have a lot of influence in the management of corporations because they will be entitled to exercise the voting rights in a company. They can actively engage in corporate governance. Furthermore, because institutional investors have the freedom to buy and sell shares, they can play a large part in which companies stay solvent, and which go under influencing the conduct of listed companies, and providing them with capital are all part of the job of management. One of the more important features of the development of stock market in India in the last 22 years has been the growing participation of FIIs. Since September 1992, when FIIs were allowed to invest in India, the number of FIIs has grown over a period of time. At end-March 2014, there were 1710 FIIs registered with SEBI. The flow of FII has been showing an effect on the Indian stock markets and that has been shown in different studies. Now the question is, is there any relationship between flow of FII and the per capita GDP growth rate of our national economy. The aim of the paper is to find out this relationship.

### **Review of Literature**

- Bose & Coondoo (2004) analyzed on the topic “The Impact of FII Regulation in India”, which was published in the Journal of Money & Finance. The study had been done to access the impact on FII flows of several policy revisions related to FII investment during the period January 1999 to January 2004, through a multivariate GARCH regression model and they found that liberalization policies have had the desired expansionary effect on the Indian Stock Markets.
- Bansal & Pasricha (2009) examined on the topic “Foreign Institutional Investors Impact on Stock Prices in India” in the Journal of Academic Research in Economics. The authors had made an empirical study about the topic and concluded that while there are no significant changes in the Indian Stock Market average return, volatility is significantly reduced after India unlocked its stock market since 14th September 1992 to foreign investors.



- Kaur & Dhillan (2010) examined on the topic “Determinants of Foreign Institutional Investors’ Investment in India” in the Eurasian Journal of Business and Economics. The aim of the study was to explore the determinants of foreign institutional investors’ (FIIs) investment in India by using secondary data for the period from 1995-2006. Data have been analyzed by different factors and it was concluded that FIIs inflows in India are determined by both stock market characteristics and macroeconomic factors.
- Mohanamani & Sivagnanasithi (2012) analyzed on the topic “Impact of Foreign Institutional Investors on the Indian Capital Market” in the Journal of Contemporary Research in Management and found that foreign institutional investments have substantial effect over the stock indices & FIIs can also influence the process of economic development of India through the positive impacts on macro-economic fundamentals of the country.
- Sultana & Pardhasaradhi (2012) analyzed on the topic “Impact of Flow of FDI & FII on Indian Stock Market” which was published in the Journal Finance Research. The authors investigated the relationship and impact of FDI & FII on Indian Stock market using statistical measures correlation co-efficient and multi regression of secondary data for the period 2001-2011. They found that flow of FDIs and FIIs in India determines the trend of Indian stock market.
- Walia, Walia & Jain (2012) observed on the topic “Impact of Foreign Institutional Investment on Stock Market” in International Journal of Computing and Corporate Research. The objective of the paper was to examine the contribution of foreign institutional investment in Sensex to examine behavioral pattern of FII during the period of 2001-2010 and to examine the volatility of BSE Sensex due to FII. The study had been made by using secondary data and found that FII were influencing the Sensex movement to a greater extent i.e., Sensex has increased when there were positive inflows of FII and there were positive inflows of FII and there were decrease in Sensex when there were negative FII inflows.
- Shrivastava (2013) studied on the topic “Influence of FII Flows on Indian Stock Market” in Accman Journal of Management. The objective of the study was to find out relationship between FII and Indian Stock Market by using secondary data from various sources from the period 2001-2010. The author concluded that FII did have high significant impact on the Indian capital market.
- Jain, Meena & Mathur (2013) examined on the topic “Role of Foreign Direct Investment and Foreign Institutional Investment in Indian Economy” which was published in Asian Journal of Multidimensional Research” and the authors concluded that the FII and FDI are influencing the economic development to a greater extent and FDI preferred over FII investments since it is considered to be the most beneficial form of foreign investment for the economy as a whole.
- Mallikarjuna Rao & Ranjeeta Rani (2013) have made an attempt on the topic “Impact of Foreign Institutional Investments on Indian Capital Market” in International Journal of Marketing, Financial Services & Management Research.

The objective of the study was to find out the relationship between Indian stock market and make comparison regarding attracting FIIs of 10 companies comprising of five major sectors like Real estate, Banking, IT, FMGC and Iron & Steel after collecting data from secondary sources for the period 2007-2012. The researcher concluded that FII is a vital component for development of financial market & higher inflows of it boost of the Indian capital markets.

- Agarwal (2013) examined on the topic “Foreign Institutional Investment: A Study of Co relationship with Mutual Funds Investment and Sensex” in Journal of Arts, Science & Commerce and concluded that FIIs net investment has positive correlation with Sensex as well as with MFs Net Investment but FII was more positively correlated with Sensex than MFs Net Investment.
- Juneja (2013) studied on the topic “Understanding the Relation between FII and Stock Market” in International Journal of Commerce, Business and Management and finds that there is a significant positive correlation between FII activity and effects on Indian Capital Market are affected by the FII inflows.
- Aswini & Kumar (2014) observed on the topic “Impact of FII on Stock Market in India in Global Journal of Finance and Management”. The objective of the study was to find out the relationship between the FII and the Indian Stock Market (NSE). Using descriptive research technique secondary data for the period from 1993 to 2014 have been analyzed and found that there is a high correlation between FII flow and the raise in the Index of Indian stock market in a large span of time but there existed a less impact in the short span of time.
- Kulshrestha (2014) examined on the topic “Impact of Foreign Institutional Investors (FIIs) on Indian Capital Market” in International Journal of Research in Business Management. The objective of the study was to examine the relationship between FII and Indian Capital Market. The author analyzed the secondary data for the period from 2000 to 2011 by using regression and correlation techniques and concluded that Foreign Institutional Investors (FII) have significant impact on the movement of Indian Capital market.

### **Research Gap**

None of the studies have been made showing the effect of flow of foreign institutional investments on the per capita Gross Democratic Production of India, so the present study has been undertaken.

### **Objectives**

- To observe the flow of Foreign Institutional Investments in Indian capital market;
- To study the effect of Foreign Institutional Investments on the growth of per capita Gross Democratic Production of India.

### **Historical Background**

Like other developed and developing countries like Brazil and China, etc, India has one of the fastest growing economies in the world and it has also one of the largest economies in the world that has supported to launch FII investments in the Indian capital market. For recovering problems of balance of payment crisis that India faced in 1991, the

liberalization of the economy was initiated. This also included opening the capital markets and allowing the FII investments to our country. India recorded its highest GDP growth in 2007, when the per capita growth rate was 8.2%. India has been achieving high growth rates in almost all the years. According to an OECD (Organization for Economic Cooperation and Development) report, the growth rates would be sustainable at 7.5% as the reforms become more widespread. The foreign institutional investors have been allowed in the Indian Economy since September 1992. In the year 2001, FII investment in India has grown by Rs. 12494.80 crore. FII investment reached Rs. 163350.10 crore in the year 2012 and number of registered FIIs was 1710 as on 31st March 2014.

### Methodology of the Study

The data are secondary in nature that have been collected from the official websites of World Bank, SEBI, etc. and the time period is taken from the year 2001 to 2014 for this analysis. The data collected are presented as bellow:

**Table 1 Annual Percentage of FII Growth/Decline from 2001 to 2014**

| Calendar Year Ended    | Total FII Investment<br>(In INR crores) | Percentage of<br>Growth/Decline |
|------------------------|-----------------------------------------|---------------------------------|
| 2000                   | 6510.90                                 | ---                             |
| 2001                   | 12494.80                                | 91.91                           |
| 2002                   | 3677.90                                 | -70.56                          |
| 2003                   | 35153.80                                | 855.81                          |
| 2004                   | 42049.10                                | 19.61                           |
| 2005                   | 41663.50                                | -0.92                           |
| 2006                   | 40589.20                                | -2.58                           |
| 2007                   | 80914.80                                | 99.35                           |
| 2008                   | -41215.50                               | -150.94                         |
| 2009                   | 87987.60                                | 313.48                          |
| 2010                   | 179674.60                               | 104.20                          |
| 2011                   | 39352.80                                | -78.09                          |
| 2012                   | 163350.10                               | 315.09                          |
| 2013                   | 62288.00                                | -61.87                          |
| 2014 (Up to end-April) | 58145.00                                |                                 |

*Source: Statistical data from Securities and Exchange Board of India.*

**Table 2 Annual Percentage of GDP per Capita Growth**

| Year                              | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Annual GDP per capita growth rate | 3.0  | 2.1  | 6.1  | 6.2  | 7.6  | 7.6  | 8.2  | 2.4  | 7.0  | 8.8  | 5.2  | 3.7  | 5.6  | 6.0  |

*Source: World Bank Data tables.*

### Analysis and Interpretation

From Table 1, it is observed that total FII Investments does not show a steady upward trend and it fluctuates year after year. During the year 2000 to 2001 it has shown 91.91 percentage increase but annual declination rate of total inflow of FII is seen to be 70.56 percent just in the next year i.e., in 2002. The annual negative rates of total inflow of FII are also shown in the years 2005, 2006, 2008, 2011 and 2013 are 0.92, 2.58, 150.94, 78.09 & 61.87 per cent respectively. On the other hand, some years have shown abnormal growth rates in total FII inflow. For example, in the year 2003 it increased by 855.81 percent and 313.48 & 315.09 percent in the years 2009 and 2012 respectively. Now if we compare and analyze Table 1 and Table 2, it can be seen that from the year 2001 to 2004 there was positive correlation between total investment and per capita GDP growth rate of India. The positive correlation has also been seen in all the years of study period except the years 2005, 2006 & 2013 where negative correlations were shown. So, we can say the flow of FII have effect on the GDP growth rate of our national economy.

### Concluding Remarks

From the above analysis it is seen that in the study period FI investment has entered in the Indian Capital Market in a fluctuating manner: in some years it has shown huge flow of investments, others show moderate flows of investments and has shown low inflow of investments in some years and which have effect on per capita annual GDP growth rate of India. So, it may be concluded that Foreign Institutional Investors can have effect on our National economy.

### Limitation of the Study

The study has been made based only on the observation of the data and the whole year's data of the year 2014 has not been updated by the Securities and Exchange Board of India.

### Scope for Further Research

There are obviously further research scopes, like what are the other effects which are visible in the Indian Economy due to flow of Foreign Institutional Investments and what are the factors other than FII, can effects on the per capita Gross Domestic Production of India, etc.

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## MARKET POSITION OF TOP IT COMPANIES IN INDIA : A STUDY OF TCS AND WIPRO

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Nazish Farooqui \*  
Dr. Anjora Belcha \*\*

### Abstract

TCS and Wipro are the important companies of Top IT Companies in India, which could survive during the past decade with extending its operations worldwide. The economic slowdown in the recent past has many sectors, for which IT sector is not an exception. They have also faced a lot of challenges– downsizing the employees, minimizing the operations, etc. with a view to cut the costs. Even through the IT companies charge a huge amount for software development, the pay and perquisites provided to the employees are considerably high. Under these circumstances, an appraisal of the Market Position of Tata Consultancy Services (TCS) Limited and Western India Palm Refined Oil (Wipro) Limited, felt necessary.

**Keywords:** *TCS, Wipro, IT Sector, Economic Slowdown, Perquisites, Market Position.*

### Introduction

Tata Consultancy Services Limited (TCSL) is a multinational information technology (IT) service, consulting and business solutions company headquartered in India. TCS operates in 46 countries.[3] It is a subsidiary of the Tata Group and is listed on the Bombay Stock Exchange and the National Stock Exchange of India. TCS is the largest Indian company by market capitalization and is the largest India-based IT services company by 2013 revenues. TCS is now placed among the 'Big 4' most valuable IT services brands worldwide. TCS is ranked 40th overall in the *Forbes* World's Most Innovative Companies ranking, making it both the highest-ranked IT services company and the top Indian company. It is the world's 10th largest IT services provider, measured by revenues.

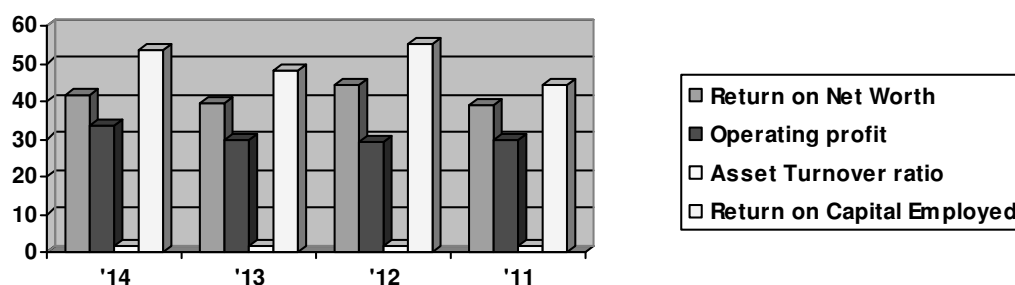
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\*\* Associate Professor, Department of Business Administration, University of Rajasthan, Jaipur, Rajasthan

### Profitability Analysis of TCS

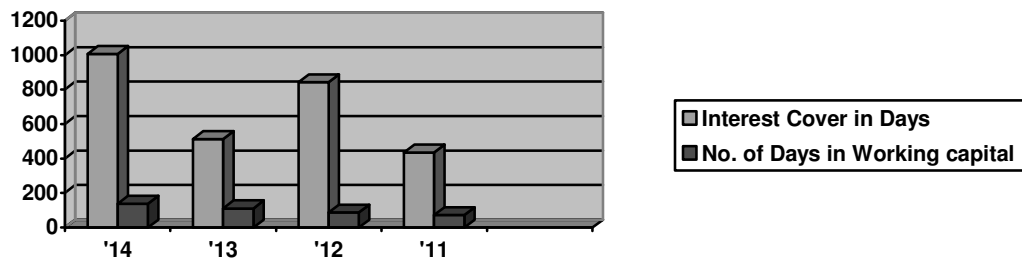
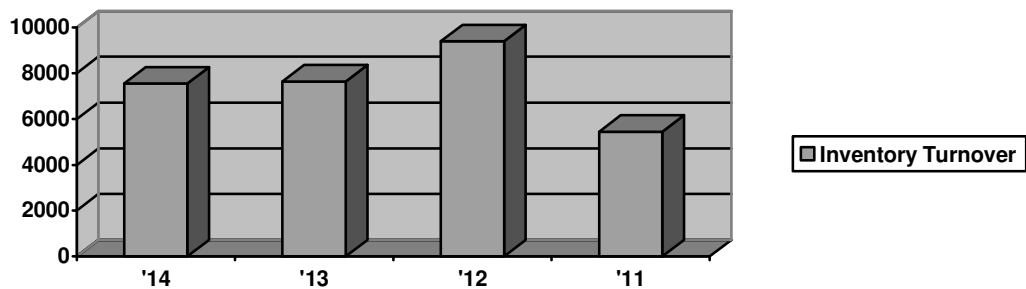
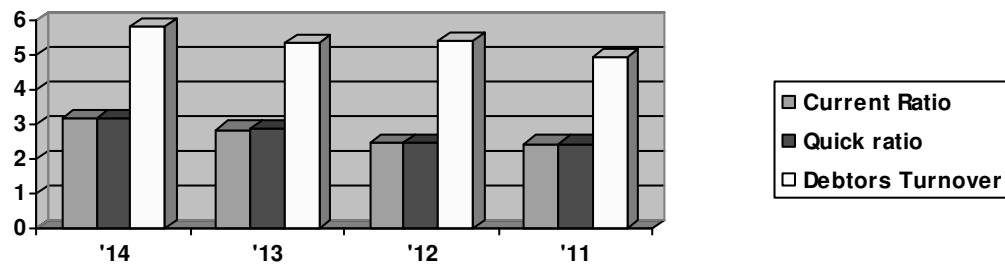
- The return on capital employed for financial year 13-14 is 53.39%. As compared to the past 4 year's performance of TCS, the return on capital employed of the company for financial year 13-14 has increased, which implies TCS is gaining more from its assets in financial year 13-14.
- The operating profit margin for financial year 13-14 is 33.29%. As compared to the past 4 year's performance of TCS, the operating profit margin of the company for financial year 13-14 has decreased, which implies TCS is earning less per dollar of sales in financial year 13-14.
- The asset turnover ratio for financial year 13-14 is 1.68%. As compared to the past 4 year's performance of TCS, the asset turnover ratio of the company for financial year 13-14 has sharply decreased, which implies TCS is not using its assets optimally to generate revenue in financial year 13-14.
- The return on net worth for financial year 13-14 is 41.87%. As compared to the past 4 year's performance of TCS, the return on net worth of the company for financial year 13-14 has increased.



### Liquidity Analysis of TCS

- The current ratio for financial year 13-14 is 3.18%. As compared to the past 4 year's performance of TCS, the current ratio has increased. The increase in current ratio in financial year 13-14 implies that TCS's market liquidity position is better and it can meet its creditors demand in better way.
- The quick ratio for financial year 13-14 is 3.16%. As compared to the past 4 year's performance of TCS, the quick ratio has increased. It implies TCS has enough short term assets to cover its immediate liabilities without selling its inventory. The liquidity position of the company is much better.
- Interest cover for financial year 11-12 is 1006.74 times. As compared to the past 4 year's performance of TCS. It implies how easily company can pay interest expenses on its outstanding debts.
- The working capital cycle in financial year 13-14 is 137.53. As compared to the past 4 year's performance, its value has increased. The right level of working capital depends on the industry and the particular circumstances of the business. Too high working capital cycle indicates the business has surplus funds which are not earning a return.

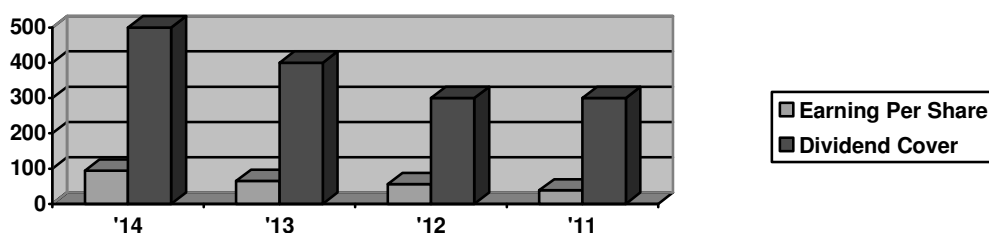
- Payable turnover ratio in financial year 13-14 is 5.79 times. As compared to the past 4 year's performance of TCS, the payable turnover ratio has increased. It implies there is a relatively short time period between purchasing inventory or materials and paying for them



### Potential Analysis of TCS

- The earnings per share in financial year 13-14 is Rs 94.17. As compared to the past 4 year's performance. As compare to financial year 12-13 earnings per share of financial year 13-14 is increased, this implies increase in the earning power of the company in financial year 13-14.
- The P/E ratio in financial year 13-14 is 26.38%. As compared to the past 4 year's performance the P/E ratio of TCS is increased. It implies that investors are expecting higher earnings growth in the future.
- The dividend cover in financial year 13-14 is 500%
- The dividend yield in financial year 13-14 is 1.18 %.





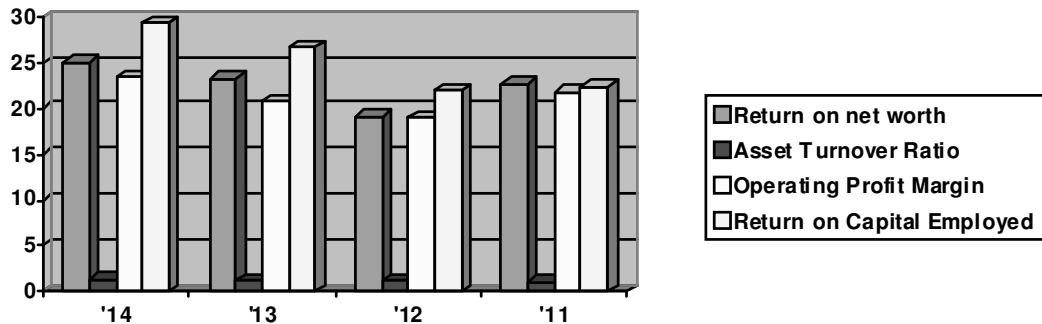
### Wipro

Wipro Ltd (NYSE:WIT) is a global information technology, consulting and outsourcing company with 147,452 employees serving clients in 175+ cities across 6 continents. The company posted revenues of \$7.3 billion for the financial year ended Mar 31, 2014. Wipro helps customers do business better by leveraging our industry-wide experience, deep technology expertise, comprehensive portfolio of services and vertically aligned business model. Our 55+ dedicated emerging technologies 'Centers of Excellence' enable us to harness the latest technology for delivering business capability to our clients.

Wipro is globally recognized for its innovative approach towards delivering business value and its commitment to sustainability. Wipro champions optimized utilization of natural resources, capital and talent. Today we are a trusted partner of choice for global businesses looking to 'differentiate at the front' and 'standardize at the core' through technology interventions. In today's world, organizations will have to rapidly reengineer themselves and be more responsive to changing customer needs. Wipro is well positioned to be a partner and co-innovator to businesses in their transformation journey, identify new growth opportunities and facilitate their foray into new sectors and markets.

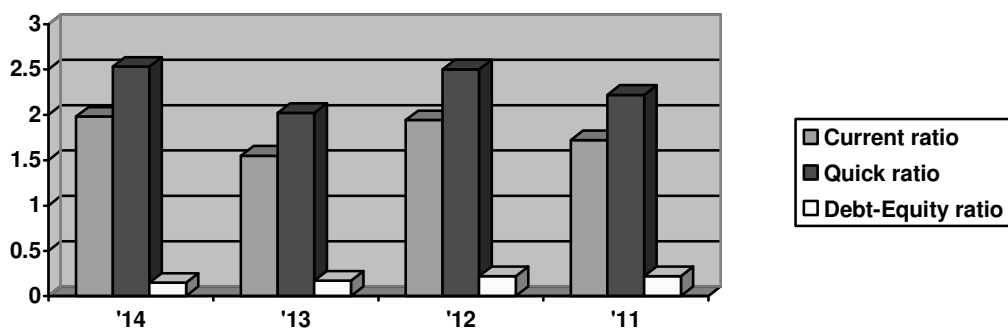
### Profitability Analysis of Wipro

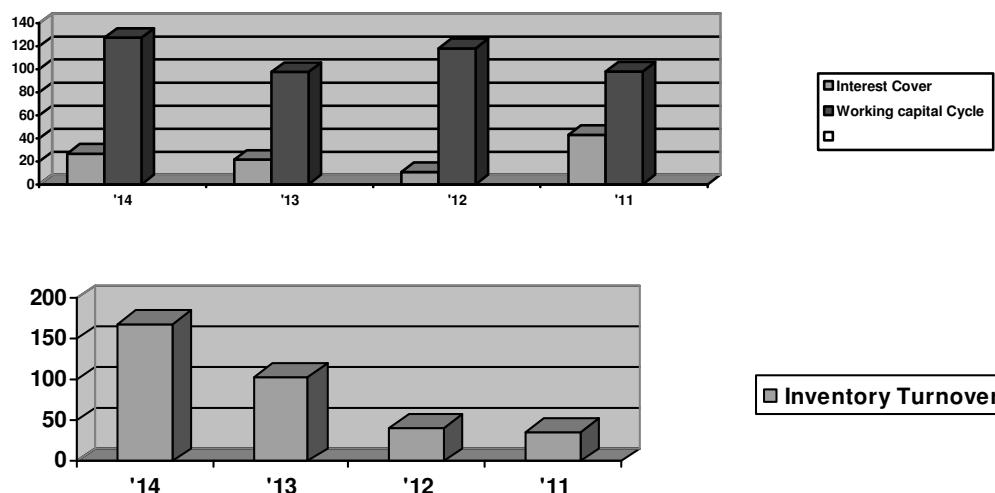
- The return on capital employed for financial year 13-14 is 29.47%. As compared to the past 4 year's performance of Wipro, the return on capital employed of the company for financial year 13-14 has increased, which implies Wipro is gaining more from its assets in financial year 13-14.
- The return on net worth for financial year 13-14 is 25.16%. As compared to the past 4 year's performance of Wipro, the return on capital employed of the company for financial year 13-14 has decreased, which implies Wipro is gaining less from its assets in financial year 13-14.
- The operating profit margin for financial year 13-14 is 23.50%. As compared to the past 4 year's performance of Wipro the operating profit margin of the company for financial year 13-14 has decreased, which implies Wipro is earning less per dollar of sales in financial year 13-14.
- The asset turnover ratio for financial year 13-14 is 1.25. As compared to the past 4 year's performance of Wipro the asset turnover ratio of the company for financial year 13-14 has decreased, which implies Wipro is not using its assets optimally to generate revenue in financial year 13-14.



### Liquidity Analysis of Wipro

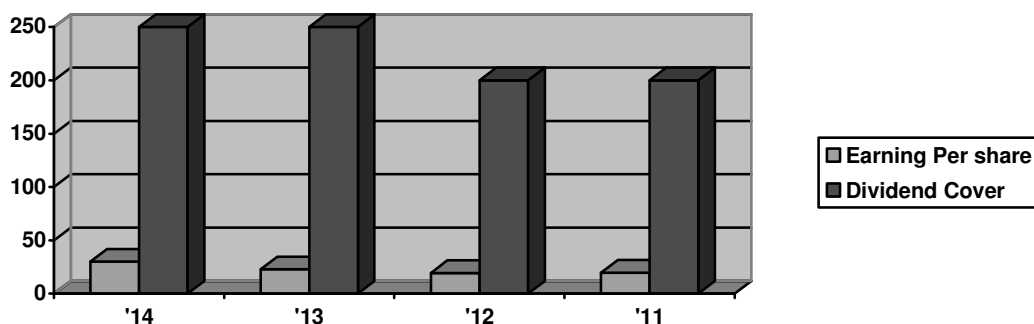
- The current ratio for financial year 13-14 is 1.98%. As compare to the past 4 year's performance of Wipro, the current ratio has increased.
- The quick ratio for financial year 13-14 is 2.53%. As compared to the past 4 year's performance of Wipro the quick ratio has increased. It implies Wipro has enough short term assets to cover its immediate liabilities without selling its inventory. The liquidity position of the company is much better.
- The debt-equity ratio for financial year 13-14 is .15 as compared to last 4 year performance of Wipro debt-equity ratio has decreased.
- Interest cover for financial year 13-14 is 26.64 times. As compared to the past 4 year's performance of Wipro, the interest cover has increased but as per financial year 12-13 the interest cover has sharply decreased in the financial year 13-14. It implies the company is burdened by debt expenses more in financial year 13-14.
- Inventory turnover ratio for financial year 13-14 is 169.76 times. As compared to the past 4 year's performance of Wipro. The increase in inventory turnover ratio indicates high demand for the product and good inventory management.
- The working capital cycle in the financial year 13-14 is 169.76. As compared to the past 4 year's performance its value has increased. The right level of working capital depends on the industry and the particular circumstances of the business. Too high working capital cycle indicates the business has surplus funds which are not earning a return.





### Potential Analysis of Wipro

- The earnings per share in financial year 13-14 is Rs 29.95. As compared to the past 4 year's performance. As compare to financial year 12-13 earnings per share of financial year 13-14 is increased, this implies increase in the earning power of the company in financial year 13-14.
- The P/E ratio in financial year 13-14 is 17.95%. As compared to the past 4 year's performance the P/E ratio of Wipro is increased. It implies that investors are expecting higher earnings growth in the future.
- The dividend cover in financial year 13-14 is 250%
- The dividend yield in financial year 13-14 is 1.36 %.



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## EFFICIENCY OF CAPITAL STRUCTURE OF TOBACCO COMPANIES OF NEPAL AND INDIA

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Dr. Keshav Prasad Gadtaula\*

### Abstract

The study examines the efficiency of capital structure in Nepalese and Indian tobacco companies for which two tobacco companies were selected from each of the countries. The ratios used to measure the efficiency of capital structure consist of capital employed ratio and interest coverage ratio. The inter-country capital employed ratios of tobacco companies showed no difference or little difference between the sample companies' of each of the countries; whereas the inter-country interest coverage ratios showed the significant difference between the sample companies of both countries. But the intra-country debt to equity was found to be significantly high between Nepalese and Indian tobacco companies. But there was not any significant difference in capital gearing ratio between Indian tobacco and Nepalese tobacco companies. Similarly, the inter-country correlation coefficient of capital employed ratio showed positive in Indian case but negative in Nepalese case.

**Keywords:** *Capital Gearing Ratio, Interest Coverage Ratio, Capital Structure Ratio, Financial Risk and Capitalization.*

### Introduction

Capital structure is defined as total debt to total assets at book value which influences the profitability and riskiness of the firm (Bos and Fetherston, 1993:53-66). Capital structure is the combination of different components of capital formation such as long - term debt, internal equity, preferred stock & common stock or equity capital. The closely related term financial structure defined as the mix of all items that appear on the right hand side of the company's balance sheet. The relationship between financial and capital structure can be expressed in equation form as; Financial structure=current liabilities=capital structure. A firm's capital structure is only part of its financial structure (Weston & Copeland, 1992: 565). Financial structure answers two questions; first, what should be the composition of the firm's sources of funds & how should a firm best divide

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its total funds sources between short and long -term components? Second, in what properties relative to the total should the various forms of permanent capital be utilized? (Keown, et.al.1998: 372).

### **Concept of Capital Structure**

Capital structure decision is a significant managerial decision which influences the shareholder's return & risk. Consequently, the market value of the share may be affected by the capital structure decision subsequently; whenever funds have been raised to finance investments a capital structure decision is involved (Pandey, 1999: 574). A firm's capital structure is the relationship between the debt & equity securities that make up the firm financing of its assets. Most firms has capital structure with debt & equity elements, the financial manager is highly concerned with the effects of borrowing. If firm is making money on its borrowing, the shareholders are realizing higher earnings per share than in absence of debt (Hampton, 1998: 166). The optimal capital structure is the set of proportion that maximizes the total values of the firm (Schall and Haley, 1983: 339). Capital structure should not be confused with capitalization. Capitalization is a quantitative aspect of financial planning as it refers to the total amount of securities issued by a company, while capital structure is concerned with qualitative aspect as it refers to the kinds of securities and to proportionate amounts that make up capitalization. Capitalization is the total of all types of long term capital or capital structure proportions of all types of long term and short term capital (Upadhaya, 1985: 799). The optimal capital structure is the combination of debt and equity that maximizes the total value of the firm or minimizes weighted average cost of capital (Pandey, 1999: 611). Optimal capital structure can be properly defined as combination of debt and equity that attains the stated management goals maximization of the firm's market value, and which minimizes the firm's cost of capital. Solomon (1963) advocated that "A firm has certain structure of assets, which offers net operating earnings of given size and quality and gives a certain structure of rates in the capital market, there is some specific securities which will be higher or the cost of capital will be lower than at any other degree of leverage." P 53

Capital structure decision can affect the value of the company either by changing the expected earnings or the cost of capital or both. If leverage affects the cost of capital and the value of firm, an optimal capital structure would be obtained at the combination of debt and equity that maximizes the total value of the firm (value of shares plus value of debt) or minimizes the weighted average cost of capital (Pandey, 1986 :227). Capital structure does not provide to financial managers with a specified methodology for use in determining financing mix for maximization of shareholders wealth but financial theory does provide help to the managers for chosen appropriate debt equity financing mix which affects the firm's value (Gitmen, 2001: 507), Moreover, Modigliani & Miller (1958) In their original proposition advocated that, the relationship between leverage and cost of capital is explained by the net operating income approach. They make a formidable attack on the traditional approach by offering behavioural justification for having the cost of capital remained constant through all degree of leverage. (Van Home, 2000: 275). This hypothesis (MM approach) is identical with the NOI approach, and M-M argue that in

the absence of taxes, a firm's market value and the cost of capital remain invariant to the capital structure changes. The original proposition of Modigliani and Miller in 1963 and 1965 which led to the foundation of corporate finance of any firm. The M.M. cost of capital hypothesis can be the best expressed in items of their propositions I and II. However, the following assumptions, regarding the behaviour of the investors and capital market, the action of the firm and environment, are crucial for the validity of the M.M. hypothesis (Van Home, 1991:269).

### **Proposition I**

The M-M proposition I states that market value of a firm is independent of its capital structure. The reason is that the value of the firm is determined by capitalizing the net operating income (NOI or EBIT) at a rate for the firm risk classes (Modigliani and Miller, 1958). According to this proposition there is no relationship between the value of a firm, as the way its capital structure is made up, and there is no relationship between the average cost of capital and capital structure.

### **Proposition II**

The proposition II states that the cost of equity rises proportionately with increase in the financial leverage in order to compensate for bearing additional risk arising from increased leverage in the form of premium. Thus, the M - M theory in the absence of tax argues that overall costs of capital as well as the value of the firms are independent of capital structure. The theory in a tax free is identical to the net operating income approach. It is also called, the value of levered firm  $V_L$  is equal to the value of an unlevered firm ( $V_U$ ) in the same risk class i.e.,  $V_L = V_U$ . With tax consideration MM theory reveals that its conclusion is identical to that of net income approach, which says that the value of a firm increases with every additional unit of debt financing. Such as, the theory suggests that it is always better to have maximum debt financing.

In addition, there has been considerable number of empirical studies undertaken in recent years, which examined the traditional capital structured determinants. Besides, the review of the despite the findings of similarity in leverage across the G-7 countries, researchers are skeptic about the findings and suggest for the further researches in this area. The specific firm characteristics that have been found to influence capital structure included the asset tangibility, size of the firm. its profitability, growth, risk, amount of non-debt tax shields, and liquidity position of the firm. The determinants of capital structure examined by the number of empirical studies during 1990s clearly portray inconsistencies in the empirical results. For example, in an attempt to establish relationship between firm size and leverage, Chaplinsky and Niehaus (1990,1993), Chatrath (1994), Munro (1996) and Barclay, Smith and Watts (1995), Barclay, Smith (1999), Barclay, Morellec, and Smith, (2006) find negative while Dawns (1993), Rajan and Zingales (1995), Hussain (1997), Donaldson (1961) among others to find positive relationship between these two variables. The studies provide contradictory evidences regarding the growth influence on the capital structure. Chang and Rhee (1990), Thies and Klock (1992), Chiarella, Pham, Sim and Tan. (1992), Dawns (1994), Chatrath (1994) and others concluded that growth variable is positively related to the firm's leverage whereas Chaplinsky and Niehaus (1990), Lowe et al. (1994), Rajan and Zingales (1995),

and Michael, G. Ferri and Wesley H. Jones (1979) and other concluded that growth variable is negatively related to the leverage. The similar disagreement has also been found on the influence of profitability on capital structure. Supporting the pecking order hypothesis, the negative relationship between profitability and leverage has been reported by Rajan and Zingales (1995), Barclay and Smith survey studies, which have examined the determinants of capital structure in the USA and Europe through survey of Chief Finance Officer, have been made under this sub section. This tabular review of related literature on the determinants of capital structure shows wide variation in the empirical findings. Such differences in the empirical results may be due to the differences in sample size, period, and the country. Among the traditional determinants of capital structure size, growth, profitability, risks, asset structure are the major variables examined in these literatures. Most of the literature presented in the 3.5 seem to agree on the direction of relationship between the leverage and the profitability (Bevan & Donbolt, 2000; Pandey, 2001; Booth et al. 2001; Casser & Holmes, 2003; & Frank & Goyal 2009. and leverage and size (Bevan & Donbolt 2000; Pandey, 2001; Booth et al. 2001; Antoniou et al., 2002; Frank & Goyal. 2003 and Haung & Song. 2006).

### **Efficiency of Capital Structure**

The efficiency of company's capital structure shows how the company's total assets are directly managed by the debt capital. The efficient management of capital structure helps to minimize the level of financial risk and maximize the return in business, which eventually, increases the market value of the firm. Three ratios have been computed for the efficiency measurement of capital structure for these tobacco firms. These are capital employed turnover ratio, interest coverage ratio and return on capital employed. These ratios exhibit how the permanent capital has been utilized by the tobacco companies to earn more profit with regards to the payment of fixed interest bearing charges. Therefore, the capital structure of tobacco companies reflects the significant impact on its long term sources of capital as debt and earning health of the firm. Shareholders' equity and business risk affect the cost of capital and market value of the firm. Appropriate capital structure is the combination of debt equity according to Modigliani Miller for maximizing the profitability without tax but Tobacco company pays maximum portion of tax paid on sales and profit. Debt equity composition shows the appropriate pattern of external and internal funds of any firm. The modern and other related theories demonstrate to maintain optimum capital structure for maximizing the shareholders' wealth. Theory of capital structure uses feature of industrial organization and has begun to appear in the corporate finance theory. Under the capital structure theory, the model can be classified into two categories. The one class of approaches in this theory is relationship between capital structure and firm's strategy when competing in the product market while another class of approach is relationship between capital structure and the characteristics of products and inputs.

### **Objectives**

The main motto of any firm is to invest fund in business to make sales and earn more profits lowering costs as well as financial risk. Therefore the study purposes to

analyze how efficiently capital structure can be managed for tobacco industries in Nepal and India.

### Methodology

This paper is based on secondary data of the manufacturing enterprises specially in tobacco sector in Nepal and India. In order to meet the objectives of this paper; four tobacco enterprises have been selected. The study is based on the secondary data covering the period from 2000 to 2009. The study uses comparative method of analysis. Different statistical tools and test of hypothesis have been used to fulfill the objectives of this paper. Concerning the statistical tools, mean, t-test, spearman's rank correlation and ANOVA test have been exercised at 5% level of significance.

### Test of Hypothesis

The research on this paper strongly holds the hypothesis criteria. The hypothesis of this research paper is as follows:

- The interest coverage ratio and capital turnover ratio is insignificant between the Nepalese and Indian tobacco companies.
- The debt equity ratio and capital gearing ratio of Nepalese & Indian Tobacco Companies is insignificant.

### Analysis

The Capital Employed Turnover Ratio and Interest coverage ratio for comparing the intra industry firms have been considered. However, risk analysis through computation of Standard Deviation and Standard Error of mean has also been used. It can be explained as under:

**Table 1 Capital Employed Turnover Ratio and Interest Coverage Ratio of Tobacco Industry of Nepal and India**

**Table 1.1 Nepalese Scenario**

| Ratios                          | JCF Mean | Se Mean | JCF SD | Surya Nepal Mean | Se Mean | Surya Nepal SD | t-values | d.f. | Result              | F value |
|---------------------------------|----------|---------|--------|------------------|---------|----------------|----------|------|---------------------|---------|
| Capital employed turnover ratio | 7.486    | .569    | 1.80   | 3.069            | .1407   | .44            | 7.526    | 18   | Significant at 1%   | 56.65   |
| Interest coverage ratio         | .407     | 1.48    | 4.70   | 1186.            | 715.3   | 1892.7         | 2.009    | 18   | Insignificant at 5% | 4.39    |

\*t .05 at 18 ,d.f = 2.101 F .05 at 18,1 d.f. =4.41

### Hypothesis

**H<sub>0</sub>: (u=0)** There is insignificant difference between the mean value of ratio measuring the capital employed turnover ratio in the selected tobacco industries of Nepalese firms.

**H<sub>1</sub>=(u=1)** There is significant difference between the mean value of ratio measuring the capital employed turnover ratio in the selected tobacco industries of Nepalese firms. Capital employed turnover ratio shows the relationship between sales and capital employed. Capital employed indicates the total of long term debt and shareholders' equity. The above table 1 shows that the calculated value of t is greater than its tabulated



value at t.05 and, therefore,  $H_0$  is rejected. It implies that there is significant difference between the mean values of capital employed turnover ratios of Nepalese tobacco firms.

### Hypothesis

**$H_0: (u=0)$**  There is insignificant difference between the mean value of ratio measuring the interest coverage ratio in the selected tobacco industries of Nepalese firms.

**$H_1=(u=1)$**  There is significant difference between the mean value of ratio measuring the interest coverage ratio in the selected tobacco industries of Nepalese firms.

The above table clearly shows the relationship of interest coverage ratios between Nepalese tobaccos firms wherever, the calculated value of t is lesser than its tabulated value at 5 percent level of significance at 18 degree of freedom. Therefore, the null hypothesis is accepted. Moreover calculated F value is lesser than tabulated value. Therefore, it can be clear that, there is insignificant difference between the interest coverage ratios in the selected tobacco industries of Nepalese firms.

**Table 1.2 Indian Scenario**

| Ratios                          | ITC Mean | Se mean ITC | ITC SD | GPI Mean | Se mean | GPI SD | t-values | d.f. | Result | F value |
|---------------------------------|----------|-------------|--------|----------|---------|--------|----------|------|--------|---------|
| Capital employed turnover ratio | 1.88     | .06         | 0.21   | 3.80     | .25     | .81    | 7.24     | 18   |        | 52.44   |
| Interest coverage ratio         | 331.24   | 149.11      | 471.53 | 43.33    | 5.75    | 18.19  | 1.93     | 18   |        | 3.72    |

\*t .05 at 18 d.f = 2.101.F .05 at 10,1 d.f. =4.41

### Hypothesis $H_0 : (u=0)$

There is insignificant difference between the mean value of ratio measuring the capital employed turnover ratio in the selected tobacco industries of Indian firms.

**$H_1=(u=1)$**  There is significant difference between the mean value of ratio measuring the capital employed turnover ratio in the selected tobacco Industries of Indian firms. Since the calculated value of t is greater than its tabulated value at t.05 and, therefore,  $H_1$  is accepted against  $H_0$ . It implies that there is significant difference between the mean values of capital employed turnover ratios of Indian tobacco firms.

### Hypothesis $H_0: (u=0)$

There is insignificant difference between the mean value of ratio measuring the interest coverage ratio in the selected tobacco industries of Indian firms.

**$H_1= (u=1)$**  There is insignificant difference between the mean value of ratio measuring the interest coverage ratio in the selected tobacco industries of Indian firms. The above table clearly exhibits that the calculated value of interest coverage ratio of t is lesser than tabulated value at 5 percent level of significance at 18 degree of freedom. Therefore, the statistical evidence proves that null hypothesis is accepted. Moreover, calculated F value is lesser than tabulated value. It can be clear that there is insignificant difference between the interest coverage ratios in the selected tobacco industries of India. The table below highlights the comparative outputs for analyzing the return on capital employed between firms and industries of Nepal and India.

**Table 2 Comparative Rank Correlations of ROCE between Countries**

| Name of Rank   | Company | Correlation             | Indian Case |       | Nepalese Case |         |
|----------------|---------|-------------------------|-------------|-------|---------------|---------|
|                |         |                         | ITC         | GPI   | JCF           | SURYA   |
| Spearman's rho | ITC     | Correlation Coefficient | 1.000       | .079  | 1.000         | -.891** |
|                |         | Sig. (2-tailed)         | .           | .829  | .             | .001    |
|                |         | N                       | 10          | 10    | 10            | 10      |
|                | GPI     | Correlation Coefficient | .079        | 1.000 | -.891**       | 1.000   |
|                |         | Sig. (2-tailed)         | .829        | .     | .001          | .       |
|                |         | N                       | 10          | 10    | 10            | 10      |

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

The numerical calculation of Charles spearman's rank correlation coefficient shows that there exists positive correlation between the return on capital employed between two Indian tobacco companies ITC and GPI. The numerical calculation helps to conclude that if the magnitude of capital employed increases by 7.9 percent, the volume of return increases by 100 percent and vice versa. However, the numerical calculation of Charles spearman's rank correlation coefficient shows that there exists negative correlation between the return on capital employed between two Nepalese tobacco companies JCF and SURYA. The numerical calculation helps to conclude that if the magnitude of capital employed increases by 89.1 percent, the volume of return decreases by 100 percent and vice versa as it is seen from the appendix 11&12, there exists negative ROCE for JCF. Similarly, the returns on SURYA NEPAL in terms of capital employed have increased gradually. Since, the rank correlation defines the cumulative analysis of return on capital employed, it can thus be interpreted that the negative correlation is because of the decreasing return of JCF that outweighs the increasing return of Surya Nepal.

**Table 3 JCF & Surya Nepal Rank Correlations of ROCE (Nepalese Case)**

| Name of Rank   | Company | Correlation             | JCF     | SURYA   |
|----------------|---------|-------------------------|---------|---------|
| Spearman's rho | JCF     | Correlation Coefficient | 1.000   | -.891** |
|                |         | Sig. (2-tailed)         | .       | .001    |
|                |         | N                       | 10      | 10      |
|                | SURYA   | Correlation Coefficient | -.891** | 1.000   |
|                |         | Sig. (2-tailed)         | .001    | .       |
|                |         | N                       | 10      | 10      |

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

The numerical calculation of Charles spearman's rank correlation coefficient shows that there exists negative correlation between the return on capital employed between two Nepalese tobacco companies JCF and SURYA. The numerical calculation helps to conclude that if the magnitude of capital employed increases by 89.1 percent, the volume of return decreases by 100 percent and vice versa. there exists negative ROCE for JCF. Similarly, the returns on SURYA NEPAL in terms of capital employed have increased gradually. Since, the rank correlation defines the cumulative analysis of return on capital employed, it can thus be interpreted that the negative correlation is because of the decreasing return of JCF that outweighs the increasing return of Surya Nepal.

**Table 4 Debt Equity Ratio and Capital Gearing Ratio of Nepalese & Indian Tobacco Company**

**Table 4.1 Nepal**

| Ratios                | JCF Mean | Se mean | JCF SD | Surya Nepal Mean | Se mean | Surya Nepal SD | t-values | d.f | Result | F value |
|-----------------------|----------|---------|--------|------------------|---------|----------------|----------|-----|--------|---------|
| Debt equity ratio     | 3.18     | 0.58    | 1.84   | 0.49             | 008     | 0.27           | 4.55     | 18  |        | 20.72   |
| Capital Gearing Ratio | 1.02     | 0.15    | 0.49   | 85.35            | 80.31   | 139.11         | 2.15     | 11  |        | 4.66    |

**Source:** Computed from the annual reports of the companies during FY 1999/2000-2008/2009.

Applying inferential analysis tools of test of significance and variance ratio test, let us formulate the hypothesis.

#### **Hypothesis**

**Ho: (u=0)**

There is insignificant difference between the mean value of ratio measuring the debt and equity in the selected tobacco industries of Nepalese firms.

**H<sub>1</sub>=(u=1)** There is significant difference between the mean value of ratio measuring the debt and equity in the selected tobacco industries of Nepalese firms. Since the calculated value of t is greater than its tabulated value at t.05 and, therefore, Ho is rejected. It implies that there is significant difference between the mean value ratio of debt and equity in the selected tobacco industries of Nepalese firms.

#### **Hypothesis**

**Ho:(u=0)**

There is insignificant difference between the mean value of ratio measuring the long Capital gearing ratio in the selected tobacco industries of Nepalese firms.

#### **Hypothesis**

**H<sub>1</sub>:(u=1)** There is insignificant difference between the mean value of ratio measuring the Capital gearing Ratio in the selected tobacco industries of Nepalese firms. The above table clearly shows the capital gearing ratio relationship between Nepalese firms. Wherever, calculated value of t is lesser than tabulated value at 5 percent level of significance at 11 degree of freedom .The null hypothesis is accepted. Moreover calculated F value is lesser than its tabulated value and it can be clear that, there is insignificant difference between the capital gearing ratios of the selected tobacco industries.

**Table 4.2 India**

| Ratios                | ITC Man | Se mean ITC | ITC SD | GPI Mean | Se mean | GPI SD | t-values | d.f. | Result | F value |
|-----------------------|---------|-------------|--------|----------|---------|--------|----------|------|--------|---------|
| Debt equity ratio     | 0.51    | 0.04        | 0.14   | 0.17     | 0.02    | 0.05   | 7.03     | 18   |        | 49.44   |
| Capital gearing ratio | 41.62   | 8.48        | 26.83  | 48.41    | 30      | 94.89  | 0.21     | 18   |        | 0.04    |

**Source:** Computed from the annual reports of the companies during FY 1999/2000-2008/2009.

Applying inferential analysis tools of test of significance and variance ratio test, let us formulate the hypothesis:

### Hypothesis

**Ho:(u=0)** There is insignificant difference between the mean value of ratio measuring the debt and equity in the selected tobacco industries of Indian firms.

**H<sub>1</sub>=(u=1)** There is significant difference between the mean value of ratio measuring the debt and equity in the selected tobacco industries of Indian firms.

Since the calculated value of t is greater than its tabulated value at t.05 and, therefore, Ho is rejected. It implies that there is significant difference between the mean value ratio of debt and equity in the selected industries of Indian firms.

### Hypothesis

**Ho:(u=0)** There is insignificant difference between the mean value of ratio measuring the Capital gearing ratio in the selected tobacco industries of Indian firms.

### Hypothesis

**H<sub>1</sub>:(u=1)** There is insignificant difference between the mean value of ratio measuring the Capital gearing Ratio in the selected tobacco industries of Indian firms.

The above table clearly exhibits the capital gearing ratio relationship between Indian firms wherever, calculated value of t is lesser than tabulated value at 5 percent level of significance at 11 degree of freedom .The null hypothesis is accepted. Moreover, calculated F value is lesser than tabulated value and it can be clear that, there is insignificant difference between the capital gearing ratios of the selected tobacco industries.

### Test for Equality of Means Between Series

Test for Equality of Means Between Series of Nepal and India are calculated below the table.

**Table 4.3: ANOVAs of Debt Equity Ratio of Nepal and India**

| Source of Variation | Sum of Sq. | Mean Square | d.f. | F Ratio | F.05 | Result          |
|---------------------|------------|-------------|------|---------|------|-----------------|
| Between Samples     | 59.18701   | 19.72900    | 3    | 22.45   | 2.87 | Not Significant |
| Within Samples      | 31.63127   | 0.878646    | 36   |         |      |                 |
| Total               | 90.81828   |             | 39   |         |      |                 |

**Source:** Computed from the annual reports of the companies during FY 1999/2000-2008/2009.

**Ho :** Null Hypothesis : There is insignificant variations between debt & equity ratio between Nepalese and Indian tobacco companies

**H<sub>1</sub> :** Alternative hypothesis: There is significant variations between debt & equity ratio between Nepalese and Indian tobacco companies.

Since the calculated value of F is greater than that of the tabulated value and hence, alternative hypothesis is accepted, which implies that debt equity ratio variations are significant in the tobacco companies of Nepal and India.

**Table 4.4. Analysis of Variation (ANOVA) of Capital Gearing Ratio of Nepal and India**

| Source of Variation | Sum of Sq. | Mean Square | d.f. | F Ratio  | F.05 | Result      |
|---------------------|------------|-------------|------|----------|------|-------------|
| Between Samples     | 21382.02   | 7127.339    | 3    | 1.637500 | 2.93 | Significant |
| Within Samples      | 126224.6   | 4352.574    | 29   |          |      |             |
| Total               | 147606.7   |             | 32   |          |      |             |

**Source:** Computed from the annual reports of the companies during FY 1999/2000-2008/2009.

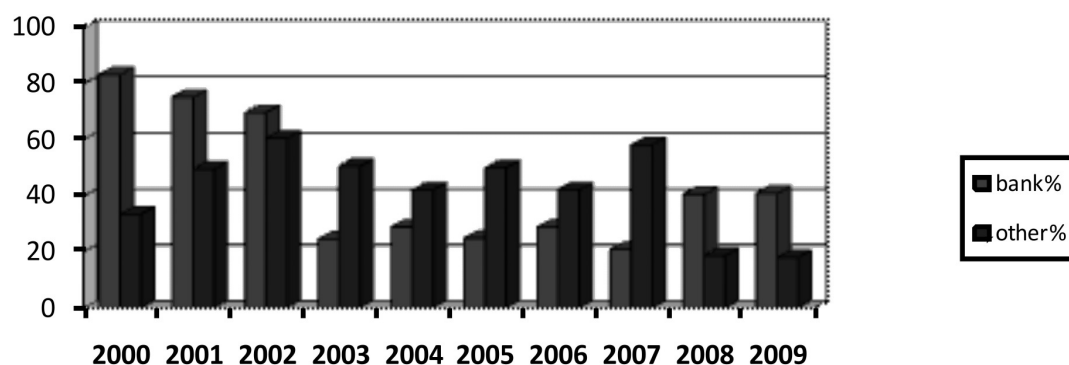
**H<sub>0</sub>** : Null Hypothesis: There is insignificant variation in capital gearing ratio between Nepalese and Indian tobacco companies.

**H<sub>1</sub>** : Alternative Hypothesis: There is significant variation in capital gearing ratio between Nepalese and Indian tobacco companies.

Since the calculated value of F is less than that of the tabulated value and hence, null hypothesis is accepted, which helps to draw the perception that capital gearing ratio variations are insignificant in the tobacco companies of Nepal and India.

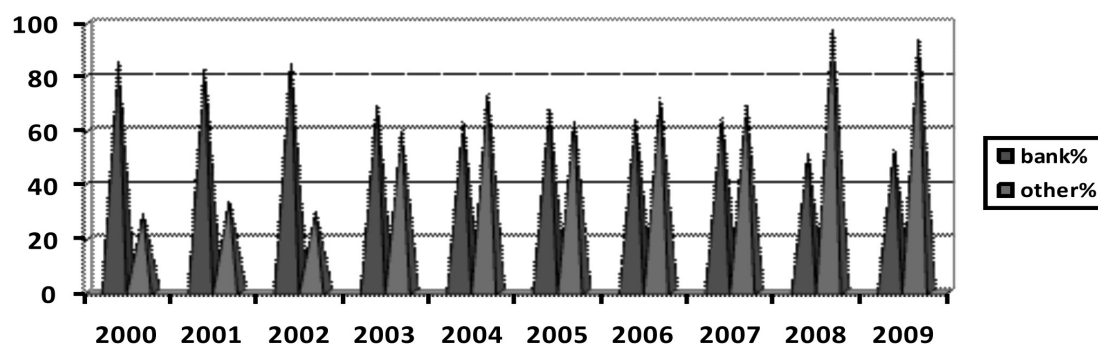
Composition of capital employed has been utilized efficiently for the long term perspective. bank and other sources like provident fund pension which are used in long term debt, are graphically presented in the following figure.

**Fig 4.1 Composition of Long Term Debt of Nepalese Company**



**From** the above figure, we can see that the company has gradually reduced the usage of bank loan in succeeding years and has slowly concentrated on loans from other sources. Despite this, the company has on average reduced its concentration of debt financing in capital structure.

**Fig 4.2. Composition of Long Term Debt of Indian Company**



As reflected by above figure, In case of Indian firm, the concentration of debt financing is more in comparison to that of equity one. However, the concentration of bank loan has gradually reduced with increase in debt from other sources.

## Conclusions

ITC payout ratio is 331.24 times from its earnings. However GPI can cover up to 43.33 times the income earned. In terms of capital employment, ITC's return is observed less in comparison to GPI. The observation of 10 years investment pattern shows that, the proportion of debt is reduced by 5.59 percent and equity is increased by 14.63 percent for ITC. Similarly compound growth rate for GPI is positive i.e., debt ratio increases with 40.94 percent along with 10.36 percent in equity. However, the proportion of debt financing is seen increased as compared to equity in progressive years. From this, it can be ascertained that even if the investment was extremely volatile, fluctuating a great deal from year to year, the compound growth gives the impression that investment with existing capital structure provided stable return throughout the tenure for Indian Firms. Thus in comparison to capital employed, interest coverage ratios are favorable for Indian firms.

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## LIQUIDITY MANAGEMENT AND PROFITABILITY: A CASE STUDY OF INDIAN OIL CORPORATION LIMITED

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### Abstract

The purpose of this paper is to find out the relationship between liquidity position and the organization's profitability and to identify the factors that affect profitability. Working capital management is considered to be an important issue in management's decision and its effects on liquidity as well as on profitability of the business enterprise. Moreover, a favourable working capital positively contributes in creating the organizations value. Liquidity and profitability have one to one relationship as well as impact on each other. In this study we have analyzed the liquidity position and profitability position covering a period of 7 years from 2008-09 to 2014-15. Profitability has been measured in terms of Net Profit Ratio, Operating Profit Ratio etc and the liquidity position has been examined on the basis of liquidity ratios like Current Ratio, Liquid Ratio & Cash Ratio etc. Pearson's correlation and analysis are used in the study. The study results confirm that there is a strong relationship between variables of the liquidity such as Current Assets and profitability of the company.

**Keywords:** *Liquidity, Profitability, Operating Profit, G2, G12, G33 & M40.*

### Introduction

The important fact in management of working capital lies in effective maintaining of its liquidity in day-to-day operation to meets its obligations. However the managers must ensure that the firm is running efficiently or not and has sufficient profitability and also there are high possibilities of a good match of current asset and current liability during this process. If this happens then it will affect the organization's growth and profitability which will further contribute towards financial improvements and

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finally firms can carry its operations without any financial problems. Many surveys have pointed out that manager's use up considerable time on day-to-day problems that involve working capital decisions they check that current assets are short-lived investments that are continually being converted into other asset types. Where as in case of current liabilities the firm is accountable for paying these obligations on a timely basis. Liquidity for the ongoing organization is not reliant on the liquidation value of its assets, but rather on the operating cash flows generated by those assets. Hence, when taken together, decisions on the level of different working capital components become time consuming frequent, repetitive. Working capital management is a very important area in the field of financial management and it involves the decision of the amount and composition of current assets and the financing of these assets. The working capital management of an organization partly affects its profitability.

### **Justification of the Topic**

Liquidity and profitability have a close relationship and they have a direct impact on each other. Liquidity means that the organization or the company have adequate amount of cash & bank balances for meeting out the day to day expenses and current liabilities. If the company fails to meet out its day to day expenses or not able to make the payments relating to the current liabilities in time then it loses its reputation, goodwill, market value of shares & faith of the investors & creditors. These factors lead to negative impact on the financial position of the organization and it also leads to decrease in the profits & increase in the losses. On the other hand if the organization or the company easily meet out its day to day expenses or to make the payments relating to the current liabilities in time then it improves its reputation, goodwill, market value of shares & faith of the investors & creditors. Thus it could be stated that the liquidity have an impact on the profitability of the organization. In this research paper we have taken the topic 'Liquidity Management and Profitability: A Case Study of Indian Oil Corporation Limited' owing to the above mentioned reasons.

### **Review of Literatures**

Deloof (2001) is of the opinion that most firms had a large amount of cash invested in working capital and it is expected that the way in which working capital is administered will have a significant impact on profitability of those firms. He established a noteworthy negative relationship between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms with the help of correlation and regression analysis. The findings of the study suggested that managers could create value for their shareholders by reducing the number of days' accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills. To determine the effect of working capital management on the net operating profitability and liquidity, Raheman and Nasr (2004) selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years. Average collection period, inventory turnover in days, average payment period, CCC, current ratio, debt ratio, size of the firm, and financial assets to total assets ratio are the selected independent variables and net

operating profit is the dependent variable used in their analysis. They found that there is a strong negative relationship between variables of working capital management and profitability of the firms. Their study also demonstrates a considerable negative relationship between liquidity and profitability, and that a positive relationship exists between size of the firm and its profitability. Furthermore, there is a significant negative relationship between debt used by the firm and its profitability. Salmi and Martikainen (1994) "the research areas are reviewed are the functional form of the financial ratios, distributional characteristics of financial ratios, classification of financial ratios and the estimation of the internal rate of return from financial statements. It is observed that it is typical of financial ratio analysis research that there are several unexpectedly distinct lines with research tradition of their own. A common feature of all the areas of financial ratio analysis seems to be that while significant regularities can be observed, they are not necessarily be stable across the different ratios, industries and time periods. This leaves much space for the development of a more robust theoretical basis and for further empirical research." Rej, Debasis & Sur, Debasis (2001) conclude that profitability of Cadbury India Ltd in terms of gross profit ratio, net profit ratio, return on investment ratio was not stable during the study period. Some variability was observed in respect of these three profitability ratios which were supported by high coefficient of variation. Eljelly, Abuzar M.A (2004) empirically examined the relationship between the profitability and liquidity on a sample of joint stock companies which are operated in Saudi Arabia. They found significant negative relationship between the profitability and liquidity position of the firms. At the industry level, the cash conversion cycle was more important than current ratio as a measure of liquidity.

### **Objectives of Study**

The study fulfils the following objectives:

- To understand the concept of liquidity & profitability.
- To examine how far liquidity have an impact on profitability of IOCL.
- To give suggestions on the basis of the findings of the study.

### **Hypotheses**

In order to achieve these objectives, the following null hypotheses are framed for testing:

- There is no significant difference of liquidity position on profitability position of IOCL from the year 2008-09 to 2014-15.
- There is no significant impact of current assets on the profitability position of IOCL from the year 2008-09 to 2014-15.

### **Limitations**

Limitations are always a part of any kind of research work, as the report is mainly based on secondary data; proper care has been be taken in knowing the limitations of the required study.

- The liquidity & profitability position of the corporation is shown just for the last seven years, ending 2015. Hence, any uneven trend before or beyond the set period will be the limitations of the study.

- This analysis is based on only monetary information the non monetary factors are ignored.
- There is non-availability of sufficient data & literature of the study.
- The research study is based on secondary data only.

### Methodology

For the study, statistical data has been collected from the annual reports published by the Indian Oil Corporation Limited. The statistical techniques like percentage, averages, coefficient of correlation, coefficient of variation, T-test have also been applied. For proper analysis and evaluation the individual items of profit and loss accounts and balance sheet have also been regrouped.

### Analysis of the Liquidity & Profitability Position of IOCL

For analyzing the liquidity & profitability position of Indian Oil Corporation Limited from the year 2008-09 to 2014-15. The liquidity ratios and profitability ratios has been used. In order to measure the liquidity position we have used the current ratio, quick ratio, absolute liquid. In order to assess the profitability position of BHEL Net Profit ratio and Operating Profit Ratio has been used. Further to understand the relationships between current assets and net profit a separate table is prepared.

#### • Current Ratio

The Current ratio measures the firm's short term solvency and it indicates the availability of current assets in rupees for every one rupee of current liability. A greater ratio indicates that the firm has more current assets than current claims & the ideal ratio is considered as 2:1. On the other hand if this ratio is low then it represents the liquidity position of the firm is not good.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Table 1 Statement Showing Current Ratio (₹ in Crores)**

| Year                    | Current Assets | Current Liabilities | Current Ratio |
|-------------------------|----------------|---------------------|---------------|
| 2008 - 09               | 44535          | 35358               | 1.25          |
| 2009- 10                | 59388          | 44751               | 1.32          |
| 2010 - 11               | 83321          | 59313               | 1.4           |
| 2011-12                 | 121726         | 129323              | 0.94          |
| 2012-13                 | 128298         | 124133              | 1.03          |
| 2013-14                 | 134577         | 135320              | 0.99          |
| 2014-15                 | 95931          | 96801               | 0.99          |
| Mean                    | 95396.57       | 89285.57            | 1.13          |
| SD                      | 34977.30       | 42392.72            | 0.19          |
| CV %                    | 36.66          | 47.48               | 16.48         |
| Growth %                | 115.41         | 173.77              | -20.8         |
| Average Annual Growth % | 16.49          | 24.82               | -2.97         |

**Source:** Compiled from Annual report of the Indian Oil Corporation Limited (2009-2015).

### Interpretation

As per the above table 1, it is found that the current ratio is not satisfactory during the study period as in all years the current ratio is less than 2:1. The current ratio is showing a decreasing trend as it was 1.32 times in the year 2009-10 and it got reduced to .94 by 2011-12. However there was a slight increase in the year 2012 -13 but it got reduced to .99 in the year 2014-15. The coefficient of variance is 16.48% and the growth percentage is at – 20.8%. The average annual growth was at -2.97%.

- **Liquid Ratio**

The liquid ratio or Quick ratio refers to the ability of the firm to pay its short term obligation as and when they become due. The liquid assets should not include stock & prepaid expenses which cannot be converted into cash within a short period. The ideal ratio is considered as 1:1. It measures the firm's capacity to pay off current obligations immediately and it is a more rigorous test of liquidity than current ratio. It is used as complementary ratio to the current ratio.

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

Liquid assets = Current assets – (Stock + Prepaid expense)

**Table 2 Statement Showing Quick Ratio (₹ in Crores)**

| Year                    | Quick Assets | Current Liabilities | Quick Ratio |
|-------------------------|--------------|---------------------|-------------|
| 2008 - 09               | 19386        | 35358               | 0.54        |
| 2009- 10                | 22894        | 44751               | 0.51        |
| 2010 - 11               | 34037        | 59313               | 0.57        |
| 2011-12                 | 64897        | 129323              | 0.5         |
| 2012-13                 | 68984        | 124133              | 0.55        |
| 2013-14                 | 69880        | 135320              | 0.51        |
| 2014-15                 | 50388        | 96801               | 0.52        |
| Mean                    | 47209.43     | 89285.57            | 0.53        |
| SD                      | 21794.25     | 42392.72            | 0.03        |
| CV %                    | 46.17        | 47.48               | 4.81        |
| Growth %                | 159.92       | 173.77              | -3.70       |
| Average Annual Growth % | 22.85        | 24.82               | -0.53       |

**Source:** Compiled from Annual report of the Indian Oil Corporation Limited (2009-2015).

### Interpretation

As per the above table 2, it is found that the quick ratio is not satisfactory during the study period as in all years the quick ratio is less than 1:1. The quick ratio is showing a balanced trend as it was .51 times in the year 2009-10 and it remained almost same by 2011-12. However there was a slight increase in the year 2012 -13 but it got reduced to .52 in the year 2014-15. The coefficient of variance is at 4.81 and the growth percentage is at – 3.70%. The average annual growth was at -0.53%.

- **Absolute Liquid Ratio or Cash Ratio**

The absolute liquid ratio is more rigorous than current ratio and quick ratio. This ratio is calculated to find out the firm's capacity to pay current obligations very immediately. The absolute liquid ratio is calculated by dividing absolute liquid asset by liquid liabilities. The absolute liquid asset includes cash in hand, cash at bank and marketable securities. The acceptable norm for this ratio is .5:1.

$$\text{Absolute Liquid Ratio} = \frac{\text{Absolute Liquid Assets}}{\text{Current Liabilities}}$$

Absolute liquid assets = Cash in hand + Bank balance + Marketable securities

**Table 3 Statement Showing Absolute Liquid Ratio (₹ in Crores)**

| Year                    | Absolute Liquid Assets | Current Liabilities | Absolute Liquid Ratio |
|-------------------------|------------------------|---------------------|-----------------------|
| 2008 - 09               | 12396                  | 35358               | 0.35                  |
| 2009- 10                | 16043                  | 44751               | 0.35                  |
| 2010 - 11               | 13960                  | 59313               | 0.23                  |
| 2011-12                 | 14067                  | 129323              | 0.1                   |
| 2012-13                 | 14141                  | 124133              | 0.11                  |
| 2013-14                 | 9890                   | 135320              | 0.07                  |
| 2014-15                 | 7381                   | 96801               | 0.07                  |
| Mean                    | 12554                  | 89285.57            | 0.18                  |
| SD                      | 2967.59                | 42392.72            | 0.13                  |
| CV %                    | 23.64                  | 47.48               | 69.08                 |
| Growth %                | -40.46                 | 173.77              | -80.00                |
| Average Annual Growth % | -5.78                  | 24.82               | -11.43                |

**Source:** Compiled from Annual report of Indian Oil Corporation Limited (2009-2015).

### Interpretation

As per the above table no. 3, it is found that the absolute liquid ratio is not satisfactory during the study period as in all years the absolute liquid ratio is less than 0.5:1. The absolute liquid ratio is showing a decreasing trend as it was 0.35 times in the year 2009-10 and it got reduced to 0.1 by 2011-12. However there was a slight increase in the year 2012 -13 but it got reduced to .07 in the year 2014-15. The coefficient of variance is at 69.08% and the growth percentage is at - 80%. The average annual growth was at -11.43%.

- **Operating Profit Ratio**

The operating profit ratio establishes the relationship between the operating profit and net sales of the organization. It indicates the operational efficiency of the organization. A higher ratio indicates good operational efficiency of the organization and a lower ratio indicates inefficiency of the organization. The formula for calculating the operating profit ratio is:

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} * 100$$

**Table 4 Statement Showing Operating Profit Ratio (₹ in Crores)**

| Year      | Operating Profit | Net Sales | Operating Profit Ratio |
|-----------|------------------|-----------|------------------------|
| 2008 - 09 | 13582            | 307123    | 4.42                   |
| 2009- 10  | 15291            | 269438    | 5.67                   |
| 2010 - 11 | 12954            | 328092    | 3.94                   |
| 2011-12   | 18443            | 438829    | 4.2                    |
| 2012-13   | 13736            | 447096    | 3.07                   |
| 2013-14   | 15702            | 437210    | 3.59                   |
| 2014-15   | 10154            | 437526    | 2.32                   |
| Mean      | 13898.50         | 364071.63 | 3.97                   |
| SD        | 2436.75          | 79344.87  | 0.95                   |
| CV %      | 17.53            | 21.79     | 23.85                  |
| Growth %  | -10.35           | 76.95     | -49.23                 |

**Source:** Compiled from Annual report of Indian Oil Corporation Limited (2009-2015).

#### Interpretation

According to table 4, the Operating Profit ratio of IOCL is representing a lower trend. It was at 4.57% in the year 2007-08 and it got decreased to 3.94% in the year 2010-11. In the year 2011-12 there was an increase up to 4.2% but again it got reduced to 2.32% by 2014-15. The Coefficient of variation was at 23.85%.

- **Net Profit Ratio**

The Net Profit ratio establishes a relationship between net profit and sales. It indicates the efficiency the management has in manufacturing, administration and selling of the products. A high net profit ratio would reveal an advantageous position in the face of falling sale price, rising cost of production and declining demand for the products. The formula for calculating the net profit ratio is:

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} * 100$$

**Table 5 Statement Showing Net Profit Ratio (₹ in Crores)**

| Year                    | Net Profit | Net sales | Net Profit Ratio |
|-------------------------|------------|-----------|------------------|
| 2008 - 09               | 2949       | 307123    | 0.96             |
| 2009- 10                | 10220      | 269438    | 3.79             |
| 2010 - 11               | 7445       | 328092    | 2.26             |
| 2011-12                 | 3954       | 438829    | 0.9              |
| 2012-13                 | 5005       | 447096    | 1.11             |
| 2013-14                 | 7019       | 437210    | 1.6              |
| 2014-15                 | 5273       | 437526    | 1.2              |
| Mean                    | 6103.38    | 364071.63 | 1.83             |
| SD                      | 2144.41    | 79344.87  | 0.97             |
| CV %                    | 35.13      | 21.79     | 53.22            |
| Growth %                | -24.26     | 76.95     | -57.30           |
| Average Annual Growth % | -3.03      | 9.62      | -7.16            |

**Source:** Compiled from Annual report of Indian Oil Corporation Limited (2009-2015).

### Interpretation

Table 5, shows that the Net Profit Ratio of IOCL from 2008-09 to 2014-15 is representing a lower trend. It was at 0.96% in the year 2008 -09 and it got decreased to 0.9% in the year 2011-12. However during the year 2013 -13 there was a slight increase up to 1.11% but by 2014-15 it got reduced to 1.2%. The Coefficient of variation was at 53.22% and the average growth rate is - 7.16.

### Testing of Hypotheses

In this study the hypotheses has been analyzed by t-test as the significance of data can be analyzed by means of statistical tools. Hence correlation & t- test have been applied in this study.

### Null Hypothesis

**H0<sub>1</sub>** : There is no significant difference of liquidity position on profitability position of IOCL from the year 2008-09 to 2014-15.

### Interpretation of t-test

| Table 6. Paired Samples Statistics |                  |      |   |                |                 |
|------------------------------------|------------------|------|---|----------------|-----------------|
|                                    |                  | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1                             | Current Ratio    | 1.13 | 7 | .19            | 0.070           |
|                                    | Net Profit ratio | 1.69 | 7 | 1.04           | .39             |

| Table 7. Paired Samples Correlations |                                  |   |             |      |
|--------------------------------------|----------------------------------|---|-------------|------|
|                                      |                                  | N | Correlation | Sig. |
| Pair 1                               | Current Ratio & Net Profit ratio | 7 | 0.649       | .115 |

| Table 8. Paired Samples Test |                                  |                |                 |                                           |        |     |        |                 |      |
|------------------------------|----------------------------------|----------------|-----------------|-------------------------------------------|--------|-----|--------|-----------------|------|
|                              | Paired Differences               |                |                 |                                           |        | t   | df     | Sig. (2-tailed) |      |
|                              | Mean                             | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |        |     |        |                 |      |
|                              |                                  |                |                 | Lower                                     | Upper  |     |        |                 |      |
| Pair 1                       | Current Ratio - Net Profit ratio | -0.56          | 0.93            | 0.35                                      | -1.416 | .30 | -1.587 | 6               | .164 |

$$r = 0.649, t = -1.587, t_{0.05} = 2.447$$

$$t < t_{0.05}$$

When the degree of freedom is 6 & the level of significance is 5%, the critical value of **t 0.05** is 2.447. Since the calculated value of t is -1.587 which is less than the critical value we conclude that the null hypothesis is accepted there is no significant difference of liquidity position on profitability position of IOCL from the year 2008-09 to 2014-15.

### Null Hypothesis

**H0<sub>2</sub>** : There is no significant impact of current assets on the profitability position of IOCL from the year 2008-09 to 2014-15

**Interpretation of t-test**

| Table 9 Paired Samples Statistics |                |          |   |                |                 |
|-----------------------------------|----------------|----------|---|----------------|-----------------|
|                                   |                | Mean     | N | Std. Deviation | Std. Error Mean |
| Pair 2                            | Current Assets | 95396.57 | 7 | 34977.30       | 13220.18        |
|                                   | Net Profit     | 5980.71  | 7 | 2447.63        | 925.12          |

| Table 10. Paired Samples Correlations |                             |   |             |       |
|---------------------------------------|-----------------------------|---|-------------|-------|
|                                       |                             | N | Correlation | Sig.  |
| Pair 2                                | Current Assets & Net Profit | 7 | -0.119      | 0.799 |

| Table 11. Paired Samples Test |                             |                    |                |                 |                                           |           |       |    |                 |
|-------------------------------|-----------------------------|--------------------|----------------|-----------------|-------------------------------------------|-----------|-------|----|-----------------|
|                               |                             | Paired Differences |                |                 |                                           |           | t     | df | Sig. (2-tailed) |
|                               |                             | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |           |       |    |                 |
|                               |                             |                    |                |                 | Lower                                     | Upper     |       |    |                 |
| Pair 2                        | Current Assets - Net Profit | 89415.85           | 35353.01       | 13362.18        | 56719.78                                  | 122111.94 | 6.692 | 6  | .001            |

$r = -0.119$ ,  $t = 6.692$ ,  $t_{0.05} = 2.447$

$t > t_{0.05}$

When the degree of freedom is 6 & the level of significance is 5%, the critical value of  $t_{0.05}$  is 2.447. Since the calculated value of  $t$  is 6.692 which is more than the critical value we conclude that null hypothesis is rejected which means that there is significant impact of current assets on the profitability position of IOCL from the year 2008-09 to 2014-15.

**Findings**

The short term liquidity position of the company was not satisfactory as the current ratio of the company had shown a decreasing trend. The short term liquidity position of the corporation was not satisfactory as the quick ratio of this corporation reflected a poor position as this ratio was less than the ideal ratio of 1:1 throughout the study period. This shows the company's capacity to pay off current obligation was poor. The cash ratio of the company was far less than the acceptable norm of 0.5:1. Thus it can be concluded that the company's capacity to pay off current obligations very immediately was very poor. The operating profit position was not satisfactory due to high cost of purchase and high rate of direct operating expenses and low increase rate of sales during the study period. The slight increase in the operating expenses during the year 2014-2015 had adversely affected the operating profit. Indian Oil Corporation Limited still requires improving its operating profit position as the profits of this company has not increased in the same proportion as compared to sales. The overall profit position was not satisfactory due to the above mentioned reasons.



### **Suggestions**

A research work does not end with its findings and analysis but it also goes one more step ahead i.e. to suggest various ways & measures to improve the overall operations of the organization.

- For the betterment of short term solvency the company should try to reduce its current liabilities.
- Steps should be taken by the company to maintain the current ratio at an ideal standard of 2:1 as the liquidity position was not satisfactory due to increase in creditors and other current liabilities.
- The company should try to improve their cash position by taking short term loans or through bank overdraft for making the payments of day to day expenses and other current obligations.
- The operating cost of this company is high due to which it consumes more of sales and there is less portion left for the retention of profit hence the company should try to reduce the operating cost.
- The company should try to earn profits in such a way that the rate of return should at least be equal to the bank rate.

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## PROFITABILITY OF LEADING PETROLEUM COMPANIES IN INDIA : AN EMPIRICAL ANALYSIS

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### Abstract

In any economy the energy sector plays an important role, the growth of the economy largely depends on the energy sector. In India, the history indicates that this sector was largely regulated by the government only. To a great extent this can be determined to be the cause of India's poor share in the world's oil and gas production and petroleum product consumption. Some of the biggest problems associated with the sector include excessive dependence on import of energy products and very little participation of private players in the sector. Realizing these issues, the government has taken steps to improve the status of the country in this field. Policies like Administered Price Mechanism have been dismantled. Moreover, the government has facilitated the entry of private players in the industry, in both upstream and downstream activities. Thus, deregulation of energy sector was supposedly a step forward to improve the Indian Petroleum Industry. It was only after independence that the government took control of the sector. Moreover in 1970s when oil crisis hit the country, nationalization of international oil majors took place in the country. It was, after this that the Administered Price Mechanism was suggested by the Oil Coordination Committee. This mechanism was aimed to assure stabilization of petroleum prices across the country. Moreover, through APM producers, refiners and marketers were compensated for operating costs and also procured a fair return on their assets. What the researcher aims at discussing through this report is not merely the APM and its dismantling, but the role that the government is playing thereafter. In this Research paper, analysis of profitability of selected public sector oil companies is undertaken. For the purpose of study, four public sector oil companies are selected. Profitability ratios considered for the purpose of analysis are Operating Profit Margin Ratio, Gross Profit Margin Ratio, Net Profit Ratio.

**Keywords:** GPR, NPR, OPR, APM, Price Mechanism, operating costs, Profitability.

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**Introduction**

The ability of a given investment to earn a return from its use may be defined as profitability. Profitability can be defined as the ability to earn profit. The word 'profitability' is composed of two words 'profit' and 'ability'. The profit as discussed earlier is the sum arrived by deducting total cost from sales revenue. On the other hand, the term 'ability' indicates the power of an enterprise to earn profit. The ability is also known as earning power, earning capacity or operating performance of the concerning investment. The ultimate objective of a business is to earn an adequate return on funds invested and maintaining a sound financial position. Adequate return depends upon various factors including the nature of business risk involved in business etc. If an enterprise fails to earn profits, invested capital is eroded and if this situation is prolonged the enterprise may ultimately cease to exist. Profitability of a business indicates the financial ability and tends to enhance the income earning capacity. In the present era, profitability analysis has taken a march over other aspects which are highlighted in analysis of financial statements in developed and developing countries. It should be noted that financial analysis is more external than internal while profitability analysis is internal as well as external. Profitability analysis helps in critically analysing and interpreting the current and prospective earning capacities of business firms. It, rather becomes more important when within the business there is an earning goal that helps to guide the behaviour of managers and other employees. It also helps the external users of accounting information relating to a particular business concern, viz. Bondholders, shareholders, potential investors, bankers and other creditors and numerous governmental agencies in maintaining its economic health by its net earnings.

Thus analysis of profitability plays a vital role in the financial analysis of firms or industries. In most of the enterprises funds are required and procured in order to operate profitability. Apart from discharging its responsibilities to its customers, its employees, its society and perhaps to the firms itself as a total organization, the paramount obligation of a firm is to use the funds entrusted to it by the owners to their maximum advantage. Because of this reason the usefulness and validity of the effort to maximize return on investment is gaining increasing acceptance as a prime measure of managements' performance in increasing the earning capacity of the firm by handling the funds entrusted to its supervision effectively. Profitability of a firm can be measured by its profitability ratios. In the process of performance appraisal of a business, profitability ratios can be calculated to measure the operating efficiency. The profitability ratios could be determined on the basis of either investment or sales, and for this purpose a quantitative relationship between the profit and the investment or the sales is established. Analysis of Profitability is done for selected Oil Companies in India. The companies selected for the study are as under:

- Bharat Petroleum Co. Ltd. (BPCL),
- Hindustan Petroleum Co. Ltd. (HPCL),
- Indian Oil Co. Ltd. (IOCL) and
- Indian Oil Corporation (IOL)

The Profitability Ratios of selected Indian Oil Companies have been analysed are as under:

- Gross Profit Margin Ratio
- Net Profit Margin Ratio
- Operating Profit Margin Ratio.

#### **Literature Review**

In the present Article titled “An empirical analysis of the profitability of Leading Petroleum Companies in India”. The study is concerned with analysis of the impact of leverage on leading petroleum companies performance evaluation. The literature related to the topic have been extensively searched at various possible sources and reviewed by the researcher.

Vijayakumar and Venkatachalam (2005) studied the impact of working capital on profitability in sugar industry of Tamil Nadu by selecting a sample of 13 companies; 6 companies in co-operative sector and 7 companies in private sector. They concluded through correlation and regression analysis that liquid ratio, inventory turnover ratio, receivables turnover ratio and cash turnover ratio had influenced the profitability of sugar industry in Tamil Nadu. Sidhu and Gurpreet Bhatia (2008) studied the factors affecting profitability in Indian textile industry. From the analysis, there was no apparent relationship between current profitability and capital intensity. The age of the firm had generally negative but statistically insignificant relationship with current profitability which pointed towards the fact that firms in Indian textile industry were absolute and needed modernization. KuldeepKaur (2008) studied size, growth and profitability of firms in India. The analysis of the study showed that there was no systematic tendency for average profitability to increase/ decrease as the size of the firm changed. Vijayakumar (2008) examined the determinants of corporate size, growth and profitability of Indian industries. Inter industry analysis revealed that the growth was positively and significantly associated with the size and in all the industry groups except textiles. He also found that the size was positively and significantly associated with the profitability in all the industries. Agarwal (2009) studied the profitability and growth in Indian Automobile manufacturing industry. The study finds no evidence to show that firms have made super normal profits. Profitability was found to be explained mainly by the age of the firms, vertical integration, diversification and industry policy dummy variable. Simon Feeny and Mark Rogers (2009) studied on overview of the performance of large Australian based private companies using a data set of 653 companies. Four aspects of performance such as profitability, growth of revenue, export intensity and innovation had been considered in this study. In addition, two important company characteristics – the debt to equity ratio and Tobin’s Q are considered. The study concluded that manufacturing firms tend to have higher profitability than nonmanufacturing firms.

Mohammed Rafiqul Islam (2000) studied the profitability of Fertilizer Industry in Bangladesh. The findings of the study indicated that none of the selected units

were consistent and all the units were plagued with declining profits. The study concluded with suggestions for improvement of the profitability of fertilizer industry in Bangladesh. Debashish Rei and Debashish Sur (2001) attempted to measure the profitability scenario of Cadbury India Ltd. and analyzed the relationship among various profitability ratios and their joint impact using multiple correlation coefficient and multiple regression method. The study on the inter-relation between the selected ratios regarding the company's position and performance and profitability of the company revealed both negative and positive association. Vijayakumar (2002) in his study on "Determinants of Profitability" – A Firm Level Study of the Sugar Industry in Tamil Nadu", developed various determinants of profitability viz., growth rate of sales, vertical integration and leverage. Apart from these three variables he had selected current ratio, operating expenses to sales ratio and inventory turnover ratio. Econometric models were used to test the various hypotheses relating profitability with other variables. The researcher noted in his conclusion that efficiency in inventory management and current assets are important to improve profitability.

#### **Objectives of the Study**

The main objectives of the present study are as follows :

- To examine, analyze and evaluate the profitability.
- To suggest ways of improving financial strength.
- To suggest measures to increase profitability.

#### **Methodology of the Study**

The present study is based basically on secondary data although some personal interviews with the executives and officials of the companies under study have been conducted to know about their working performance, profitability, leverage condition and future plans. The secondary data have been collected through published annual reports and accounts of the companies under study, periodicals, newspapers and other publications. After making detailed interpretation and inter-companies comparison, conclusions have been drawn and appropriate suggestions have also been given to the management of the petroleum companies under study to improve their profitability as well as overall performance.

#### **Hypothesis of the Study**

The null hypothesis for the study assumed as under:

**H<sub>01</sub>** : The profitability of the petroleum companies under study is not satisfactory.

#### **Analysis of Profitability of Petroleum Companies under Studies**

##### **Profitability based on Sales**

From profit point of view, it is significant that adequate profits are earned on each unit of sales. Profit is a factor of sales and is earned indirectly as a part of sales revenue. Whenever a firm makes sales, it earns profit in general. But how much of the total sales revenue is going to be used for meeting the cost of goods sold, depreciation, indirect expenses, tax liability and return to shareholders etc. If adequate profits are not earned on sales, it will be difficult to meet out operating expenses and no dividend will be paid to

shareholders. All this and other aspects can be analysed with the help of profitability ratios. The profitability ratios based on sales can be divided as follows:

- Gross Profit Ratio
- Net Profit Ratio
- Operating Profit Ratio
- **Gross Profit Ratio**

According to B.R. Rao, "Gross profit margins ratio indicates the gross margin of profits on the net sales and from this margin only all expenses are met and finally the income emerges." Gross Profit is arrived at by deducting the cost of goods sold from the net sales. A high gross profit Margin ratio is a sign of good management. As per Kennedy, a gross margin ratio may increase due to any of the following factors :

- \* higher sales prices, cost of goods sold remaining constant;
- \* lower cost of goods sold, sales price remaining constant.
- \* a combination of variation in sales prices and costs, the margin widening, and
- \* an increase in the proportionate value of higher margin items.

A low gross profit margin may reflect higher cost of goods sold due to firm's inability to purchase raw materials at favourable terms, inefficient utilisation of plant and machinery, or over investment in plant and machinery, resulting into higher cost of production. The ratio will also be low due to a fall in prices in the market, or marked reduction in selling price by the firm in an attempt to obtain large sales volume, the cost of goods sold remaining unchanged. The gross profit ratio of the Petroleum Companies under study has been presented in the following Table 1 :

**Table 1 Gross Profit Ratio of Selected Petroleum Companies (2009-10 to 2013-14)**  
(Ratio in Percentage)

| Year      | OIL   | IOCL   | BPCL  | HPCL   |
|-----------|-------|--------|-------|--------|
| 2009-10   | 72.58 | 12.61  | 13.35 | 9.02   |
| 2010-11   | 66.97 | 9.18   | 7.49  | 42.32  |
| 2011-12   | 72.18 | 3.09   | 7.06  | 0.06   |
| 2012-13   | 68.03 | 2.29   | 9.02  | 0.88   |
| 2013-14   | 67.59 | (0.05) | 7.98  | 4.47   |
| Average   | 69.47 | 5.42   | 8.98  | 11.35  |
| Std. dev. | 2.63  | 7.35   | 3.93  | 15.31  |
| C.V.      | 3.76  | 90.69  | 37.15 | 127.05 |

**Source : Computed and compiled from Annual Reports and Accounts of the Petroleum Companies under study for the period from 2009-10 to 2013-14.**

Table 1 shows that OIL had a fluctuating trend during the period under study. In the year 2009-10, the gross profit ratio for company was 72.58 per cent which came down sharply to 66.97 per cent in 2010-11. In 2011-12, it increased and reached to 72.18 per cent but decreased to 68.03 per cent in 2012-13 and further came down to 67.59 per cent in 2013-14. The average for the period under study was 69.47 per cent which was highest



among all selected petroleum companies. Standard deviation was 2.63 and coefficient of variation at 3.76 per cent indicating consistency in gross profit ratio.

#### **Interpretation**

This ratio of the company can be regarded quite satisfactory because in such a case the company can easily recover its operating expenses. For IOCL, it can be visualized from Table 1 that the gross profit ratio showed a decreasing trend throughout the period under study. The gross profit ratio was 12.61 per cent in 2009-10 which decreased to 9.18 per cent in 2010-11, 3.09 per cent in 2011-12, 2.29 per cent in 2012-13, declined further and became negative -0.05 per cent in 2013-14. The average 5.42 per cent was lowest among selected companies, standard deviation was 7.35 and coefficient of variation at 90.69 per cent indicating high volatility in gross profit ratio during the period under study.

#### **Interpretation**

This condition of the company can not be regarded satisfactory because in such a case, the company can not recover its operating expenses. The management of the company should try to control the cost of goods sold by reducing and controlling the various components of cost of production. In case of **BPCL**, the gross profit margin ratio showed a decreasing trend except in the year 2011-12. It was 13.35 per cent in 2009-10 which declined to 7.49 per cent in 2010-11 and came down to 7.06 per cent in 2011-12, then it increased to 9.02 per cent in 2012-13 but decreased up to 7.98 per cent in 2013-14. The average was 8.98 per cent, standard deviation came 3.93 and coefficient of variation was at 37.15 per cent which indicated variations more than OIL but less than IOCL and HPCL.

#### **Interpretation**

It was found that the root cause responsible for the decline in gross profit ratio was not domestic but it was at global level where the cost of raw crude oil was constantly increasing while the selling prices were unchanged. In the case of **HPCL**, the gross profit ratio registered a fluctuating trend throughout the period under study. For the year 2009-10, the gross profit ratio was 9.02 per cent which increased very sharply to 42.32 percent in 2010-11 because of the unexpected increase in the petroleum products prices i.e., gasoline, lubricants etc. while the cost of production was kept under control. But this situation could not be maintained in the following years and because of unexpected increase in the cost of raw material, processing cost etc., the gross profit ratio decreased to 0.06 percent in 2011-12. Then increased very slightly in next year 2012-13 to 0.88 per cent and finally increased and reached up to 4.47 percent in 2013-14.

#### **Interpretation**

The average gross profit ratio in HPCL was 11.35 percent for the period under study, standard deviation was 15.31 and coefficient of variation was 127.05 percent which was the highest indicating maximum fluctuations and hence inconsistency in gross profit ratio for HPCL.

To sum up, comparing the variability of gross profit margin position of the companies under study, it is evident from the table that the gross profit ratio in HPCL was highly variable which is denoting an unfavourable position and a slight decrease in sales may adversely affect the profitability of the company. The variations in the gross

profit ratio of BPCL can be regarded somewhat consistent while the variation in gross profit ratio in IOCL was also high and inconsistent. It can be summarized that the variation in gross profit of IOCL and HPCL were very high while it was moderate in the case of BPCL and most satisfactory and most consistent in OIL.

- **Net Profit Ratio**

Net profit ratio shows the relationship between net profit and sales as well as managerial efficiency towards manufacturing, administering and selling the product. The net profit ratio is used to judge firm's overall ability to turn each rupee of sales into net profit. A business concern will fail to achieve satisfactory return on shareholders fund if the amount of net profit is not adequate. The net profit ratio of the Petroleum Companies under study has been presented in the Table 2.

**Table 2 Net Profit Ratio of Selected Petroleum Companies (2009-10 to 2013-14)**

(Ratio in Percentage)

| Year      | OIL   | IOCL  | BPCL  | HPCL  |
|-----------|-------|-------|-------|-------|
| 2009-10   | 26.66 | 6.17  | 3.51  | 3.77  |
| 2010-11   | 27.79 | 3.57  | 1.81  | 2.16  |
| 2011-12   | 29.94 | 2.97  | 0.38  | 0.59  |
| 2012-13   | 27.48 | 3.76  | 1.14  | 1.88  |
| 2013-14   | 27.77 | 3.10  | 1.43  | 1.18  |
| Average   | 27.93 | 3.91  | 1.65  | 1.92  |
| Std. dev. | 1.34  | 1.00  | 1.00  | 1.05  |
| C.V.      | 4.73  | 24.33 | 55.55 | 50.48 |

Source : Computed and compiled from Annual Reports and Accounts of the Petroleum Companies under study for the period from 2009-10 to 2013-14.

The net profit ratio for **OIL** showed a fluctuating trend as visualized from Table 4.2. In 2009-10, the ratio was 26.66 per cent in 2009-10 which increased to 27.79 per cent in 2010-11 and further inclined up to 29.94 per cent in 2011-12. Then, it decreased to 27.48 per cent in 2012-13 which slightly increased and reached to 27.77 per cent in the final year of the period under study, 2013-14.

**Interpretation**

The average was 27.93 percent with standard deviation 1.34 and coefficient of variation was 4.73 percent indicating consistency in ratio for OIL and hence satisfactory condition for the study period. It can be observed from this table that the net profit ratio in **IOCL** registered a fluctuating trend through out the period under study and varied within the range of 2.97 per cent to 6.17 per cent. In 2009-10, it was 6.17 per cent in 2009-10 that decreased to 3.57 per cent in 2010-11 and further came down to 2.97 per cent in 2011-12, then increased up to 3.76 per cent in 2012-13 which decreased slightly and reached to 3.10 percent in 2013-14.

**Interpretation**

The average was 3.91 per cent, standard deviation 1.00 and coefficient of variation was 24.33 per cent which indicated consistency in net profit ratio of IOCL and hence a



satisfactory condition although the average ratio was very less than oil. Table 2 shows that net profit ratio in **BPCL** had a fluctuating trend during the period under study. The net profit ratio in 2009-10 was 3.51 percent which decreased to 1.81 per cent in 2010-11 and further came down to 0.38 per cent in 2011-12. The decreasing trend indicates that efforts were not made to boost up the sales while the indirect expenses increased. The ratio then increased to 1.14 per cent in 2012-13 and inclined again to reach up to 1.43 per cent in 2013-14 because of increase in sales revenue.

#### **Interpretation**

The average net profit ratio was 1.65 per cent which was not satisfactory because in such a situation, the company can not face any type of adversity. The variations in net profit ratio of BPCL were also high as standard deviation was 1.00 and coefficient of variation was 55.55 per cent which should be controlled by management. In **HPCL** also, the net profit ratio showed a fluctuating trend throughout the period under study. The net profit ratio in 2009-10 was 3.77 per cent that declined to 2.16 per cent in 2010-11 and again decreased up to 0.59 per cent in 2011-12. The declining trend of net profit ratio cannot be regarded favourable as the company fails to fulfil the expectations of shareholders. On the other hand, it also signifies under utilization of available capacity resulting into increased expenses. After 2011-12, the company had tried to control the expenses and to increase the sales, as a result, the net profit ratio increased to 1.88 percent in 2012-13. But during 2013-14, the net profit ratio decreased to 1.18 per cent which again shows an inefficient management to maintain the required rate of return and a failure to control the expenses.

#### **Interpretation**

The average of the net profit ratio of HPCL was 1.92 which is not satisfactory and signifies that the company is not in the position to take advantage of profitable situation. The standard deviation was 1.05 and coefficient of variation came to be 50.48 per cent which indicates that fluctuations in net profit ratio was also high.

To sum up, as a whole, on the basis of inter-company comparison, it can be said that the net profit position of OIL was the best because its profit margin was highest among companies under study, IOCL was satisfactory because it can overcome operating expenses easily but it should be improved as the average profit was not remarkable, while the management of HPCL and BPCL should strengthen their efforts to improve their condition which was not satisfactory because the ratio was very low for these companies.

- **Operating Profit Ratio**

The operating ratio is computed to express cost of operations excluding financial charges in relation to sales. Corollary of it is operating profit ratio. It helps to analyse the performance of business and throws light on the operational efficiency of the business. It is very useful for inter-firm as well as intra-firm comparison. Lower operating ratio is a very healthy sign. A higher operating profit ratio denotes better operational efficiency of the firm. A higher operating profit ratio means that a firm has been able not only to increase its sales but also been able to cut down its operating expenses. In the present

study, operating profit ratio of the Petroleum Companies under study has been calculated by using previous formulae and presented in the following Table 3.

**Table 3 Operating Profit Ratio of Selected Petroleum Companies (2009-10 to 2013-14)**  
(Ratio in Percentage)

| Year      | OIL   | IOCL   | BPCL   | HPCL    |
|-----------|-------|--------|--------|---------|
| 2009-10   | 44.45 | 4.50   | 5.66   | 2.20    |
| 2010-11   | 43.73 | 2.07   | (0.75) | 1.59    |
| 2011-12   | 44.91 | (2.79) | (0.38) | (5.82)  |
| 2012-13   | 39.33 | (2.96) | 3.22   | (4.34)  |
| 2013-14   | 39.83 | (5.54) | (5.54) | (9.85)  |
| Average   | 42.45 | (0.94) | 0.44   | (3.24)  |
| Std. dev. | 2.54  | 3.51   | 2.19   | 4.29    |
| C.V.      | 5.9   | (76.8) | 109.5  | (153.7) |

Source : Computed and compiled from Annual Reports and Accounts of the Petroleum Companies under study for the period from 2009-10 to 2013-14.

From Table 3, it is clear that a fluctuating trend was shown by operating profit ratio in **OIL** during the period under study. Starting from 44.45 per cent in 2009-10, the ratio decreased to 43.73 percent in 2010-11 but increased to 44.91 per cent in the next year 2011-12. Again, it declined up to 39.33 per cent in 2012-13 and after a slight increase, it came to 39.83 per cent in the final year 2013-14.

#### **Interpretation**

The average came to be 42.45 per cent with standard deviation 2.54 and coefficient of variation at 5.90 per cent indicating a very good condition with highest consistency comparative to other selected petroleum companies for the study. It is evident from Table 3 that the operating profit ratio of **IOCL** was highly unsatisfactory. In 2009-10, it was 4.50 per cent which decreased to 2.07 per cent in 2010-11. The operating profit ratio had been negative for the remaining years which shows that the operating cost was higher than the sales revenue. In 2011-12, the ratio came down to -2.79 per cent which decreased to -2.96 in 2012-13 and reached after decreasing again up to -5.54 per cent in 2013-14. The average of the operating profit ratio was also negative as it was -0.94 percent.

#### **Interpretation**

The negative ratio indicates that the cost of production was high and further enhanced by operating expenses. The company did not try sufficiently to increase the sales. Though the sales was increased but not in the proportion to increase in operating cost. The standard deviation was 3.51 and coefficient of variation came -76.8 percent which denotes a depressing operational efficiency of the company. The management of the company is required to pay attention to it and increase the sales as well as control the operating expenses. It is evident from Table 3 that **BPCL** showed a fluctuating trend during the period under study for operating profit ratio. In 2009-10, the ratio for the company was 5.66 per cent that decreased sharply and became negative to -0.75 per cent

in 2010-11 which increased slightly to -0.38 per cent in 2011-12, then further inclined and became positive to 3.22 per cent in 2012-13 but declined sharply to -5.54 per cent in the year 2013-14. The average was 0.44 per cent which was positive and better than IOCL, standard deviation was 2.19 and coefficient of variation came to be 109.5 percent.

#### **Interpretation**

The negative operating profit ratio indicates that the sales revenue was higher than the operating cost. It indicates that the company increased the sales as well as kept the cost of production under control. But due to sudden increase in the prices of crude oil at international level, the cost of production could not be controlled and it exceeded the sales revenue resulting into operating loss. The operating profit ratio position in HPCL is rather more worse than that of IOCL. The operating profit ratio in HPCL was 2.20 present in 2009-10 denoting a favourable position but the ratio decreased to 1.59 percent in 2010-11 and came down sharply and became negative at -5.82 percent in 2011-12 which shows that the operating cost was more than the sales revenue. Again in 2012-13, the ratio increased but was negative -4.34 percent which further declined up to -9.85 per cent in 2013-14.

#### **Interpretation**

The average was -3.24 per cent, standard deviation was 4.29 and coefficient of variation was 153.7 per cent which indicated mismanagement, improper planning and under utilization of the available resources.

To sum up, on the basis of inter-company comparison, it can be said that the operating profit position of OIL was highest with maximum consistency for the period under study. It was positive throughout the study period whereas remaining three companies have negative ratio most of the years. Among them BPCL showed average negligible but positive and IOCL and HPCL showed their average ratios negative. From this analysis, it can be concluded that OIL should continue with present state of ratio whereas other companies need serious efforts to come out of loss first and then try to earn some profit in a consistent manner.

#### **Conclusion**

There is significant difference between Profitability Ratios between companies, according to all the three ratios considered i.e. The profitability of the selected companies measured through Operating Profit Margin Ratio, Gross Profit Margin Ratio and Net Profit Ratio. On the whole, it can be concluded From this profitability analysis, it is clear that among selected petroleum companies for the present study, OIL showed maximum consistency for every ratio, the average values were highest, standard deviation and coefficient of variation were minimum. These facts clearly indicate that OIL was in most satisfactory and consistent condition and its performance can be taken as ideal by the other three petroleum companies because their performance were neither satisfactory nor consistent during the period under study from 2009-10 to 2013-14, therefore our H01null hypotheses is accepted.

#### **Suggestions and Recommendations**

Some suggestions can be given after this study which may be useful for improvement of profitability in the selected petroleum companies OIL, IOCL, BPCL and HPCL are given as follows:

- The Gross Profit Ratio of the company OIL can be regarded quite satisfactory for the period under study and it is recommended that company should continue with possible improvement.
- The gross profit ratio of the company IOCL cannot be regarded satisfactory because in such a case, the company can not recover its operating expenses. It is suggested that the management of the company should try to control different expenses and various components of cost of production.
- The average gross profit ratio of BPCL was low for the period under study. It is suggested that company should improve the ratio in future.
- In case of HPCL, it is suggested that company should improve the gross profit ratio in future keeping fluctuations in control.
- The coefficient of variation of gross profit ratio for IOCL and HPCL was very high while it was moderate in case of BPCL and minimum for OIL, so it is suggested that IOCL and HPCL should try to decrease the fluctuations in gross profit ratio
- The Net Profit Ratio of the company OIL can be regarded quite satisfactory for the period under study and it is recommended that company should continue it in future.
- It is suggested that the net profit ratio of IOCL should be improved in future and consistency was found satisfactory during the period under study, that should be continued.
- The average net profit ratio of BPCL was low for the period under study with high fluctuations. It is suggested that company should improve the ratio in future with consistency.
- For HPCL also, it is suggested that net profit ratio should be improved keeping fluctuations in control.
- Among selected petroleum companies, the net profit ratio of only OIL was satisfactory for the period under study, so it is suggested that managements of IOCL, HPCL and BPCL should strengthen their efforts to improve the ratio in future.
- For Operating Profit Ratio, OIL showed very satisfactory condition with consistency hence, it is suggested that company should continue this in future as well.
- In case of IOCL, operating profit ratio performance was not satisfactory, hence it is suggested that company should improve the ratio in future keeping fluctuations in control.
- In case of BPCL, negative operating profit ratio shows highly unsatisfactory condition, hence it is suggested that company should come out of loss, improve the ratio in future keeping fluctuations in control.

- For operating profit ratio, HPCL had negative average ratio with very high fluctuations which indicated mismanagement, improper planning and under utilization of the available resources. It is suggested that the company should start sincere efforts to improve this ratio.
- The operating profit ratio of OIL showed a satisfactory position while IOCL and HPCL have negative average ratio for the period under study and BPCL also not up to the mark, so the later three companies must try to attain at least satisfactory level.

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## NETWORK MARKETING : AN EFFECTIVE BUSINESS MODEL

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### Abstract

Direct selling is the traditional form of marketing. MLM is a variant of direct selling. It is very important for multilevel marketing distributors to perceive things as they really are in order to make accurate and useful decisions. In MLM, the distributors are compensated not just for their respective sales but for sales generated by people they recruit. It is very important for MLM distributors to perceive things as they really are in order to make accurate and useful decisions. Distributors may sometimes show the tendency to believe that they see the real truth before they actually collected ample facts. This paper describes the problems and set out a research paradigm to investigate (the influence of demographics on the perception level of MLM distributor. A rights perception towards MLM is a pre requisite in building a wide network that eventually results in better performance in the field.

**Keywords:** *Direct Selling, Multilevel Marketing, Distributors, Perception, Compensation Plans.*

### Introduction

MLM is gaining much attention in business circles. The concept of MLM is a method of product distribution only. The products are moved through independent distributor. The distributors are given an opportunity to introduce other distributors to the business. Instead of incurring massive media advertising and sales promotion cost, the saving are passed on to distributor consumers it is the traditional form of marketing. It typically include in home selling situation such as door to door solicitations, appointment and product parties as well as the catalogues and the internet to disseminate information. It is a type of business opportunity that is very popular with

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people looking for part time flexible business, some of the best companies in America including Avon, Mary Kay Cosmetics and Tupperware fall under the network marketing umbrella. It is a marketing strategy in which the sales force is compensated. The resulting sales force is referred to as the participant's down line and can provide multiple levels to compensation. Direct selling method in which independent agents serve as distributors of goods and services and are encouraged to build and manage their own sales force by recruiting and training other independent agents. In this method commission is earned on the agents' own sales revenue, as well as on the sales revenue of the sales force recruited by the agents and recruits called down line.

### **Review of Literature**

Direct selling involves selling consumer goods to private people in contrast in which retail selling does not usually occur, such as in home and word place. Network marketing companies are a special type of direct selling organization because their agents can generate income in two ways. A literature review revealed that there was very few research investigating consumers' perceptions of network marketing as a type of direct selling. The study researched network marketing is an effective business model to earn profit by direct selling. The study found a direct relationship between a sales person's low self image activity on the job and job satisfaction.

### **Significance of the Study**

With the economic reforms and liberalization, marketing will promote India's economic development at an accelerated pace. Most well known MNCs are already here to generate a strong competition. The new strategy in the marketing system to capture customers is multilevel marketing. Therefore the present study is an attempt to analyze and elicit information regarding the network marketing is an effective business model, which might be helpful to properly conceive the very concept of the system and eventually to achieve a better performance.

### **Objective of the Study**

The study focuses on the following areas:

- To evaluate the MLM as an effective Business Model
- To examine how the concept of MLM system is perceived by distributors
- To assess the growth of MLM.

### **Methodology**

The present study is based on both primary and secondary data. The empirical data for this study was obtained through a survey conducted among 614 distributors of selected companies in their regions of Kerala. The said companies are chosen because they are all affiliated to IDSA and very popular in the MLM circles of Kerala.

### **Findings**

An analysis regarding network marketing is an effective business model reveals that the normal person can earn maximum profits without any investment.

- MLM is a business which can be started by any person; it does not matter where he/she belongs, marital status, sex, demographic features etc.
- It generates source of income.

- It does not require qualifications that are Why it is very effective business model.

### **Recommendations**

Based on the findings of the study researchers would like to give the following recommendation suggestions to strengthen the MLM business and to avoid its present pitfalls in order to build up a clean and healthy industry image the government can legalise the business by enacting suitable law in the country to regulate the operation of MLM companies. The govt. can impose strict regulations on direct sellers, including an upfront investment and a security deposit to protect consumers. Many of the respondents are joined under the influence of other specially from friends and relatives rather than they really understand the concept of MLM. Therefore it is necessary for the prospects to clearly understand the concept of MLM.

### **Conclusion**

Direct sales have become so popular in our country because it offers everyone the chance of becoming a successful self-employed opportunity with the freedom to win people wishing to join the business opportunity must make sure that the entry into the business is inexpensive and the any investment should be on for products and the quantity of stocking should be purely on the ability of a distributor to sell within a reasonable period of time. Before they join as distributors it is essential to understand the system well and should not be done on the basis of income claims or attract of higher positions.

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## PERFORMANCE ANALYSIS OF SFC THROUGH PROFITABILITY ANALYSIS (A Comparative Study of RFC and DFC)

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### Abstract

Financial appraisal is an objective evaluation of the profitability and financial strength of a Business unit. Many a times, the terms financial performance appraisal and financial statement analysis are used as synonymous. The techniques of financial statement analysis are used for the purpose of financial appraisal. Therefore, financial appraisal is the process of scientifically making a relevant, comparative and critical evaluation of the profitability and financial health of a given firm through the application of the techniques of financial statement analysis. The accounting system is concerned with the classification, recording, summarizing and presentation of financial data. This data is analysed for the purpose of evaluation and appraisal of the performance. Financial statement analysis attempts to unveil the meaning and significance of the items composed in profit and loss account and the balance sheet so as to assist the management in the formation of sound operating financial policies. Undoubtedly, the analysis and appraisal of financial statements reveal the significant facts relating to financial strength, profitability, corporate efficiency, weaknesses, managerial performance, solvency and other such factors relating to a company. Financial appraisal is a scientific evaluation of the profitability and financial strength of a business concern. Financial appraisal is the process of scientifically making a proper, critical and comparative evaluation of the performance, i.e. the profitability and financial health .

**Keywords:** *SFCs, RFC, DFC, Profitability, Financial Strength, Financial Appraisal.*

### Introduction

Statements prepared with the help of accounting information are known as financial statements. Analysis of financial statements involves two jobs: (1) Analyzing the data , and (2) Interpreting the analyzed data.

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The process of applying different tools of analysis to know the behavior or nature of accounting information is known as analysis. Commenting up on the analyzed data is known as interpretation of data. The resources from the private sector were not forthcoming and consequently leaders of that time though it fit to have directed industrialization in the states. It was expected that this policy would not only lead to industrialization of the respective States but would also fulfill the social obligations like economic development of the regions, development of backward areas, encouraging entrepreneurship, removal of poverty, providing employment of people of the state, development of village, tiny, cottage and small-scale industry etc. The study makes an attempt to analyze the profitability of selected SFCs in northern India.

The Rajasthan Financial Corporation (RFC) was constituted under a notification of the State Government 7th January, 1955 under the State Finance Corporations Act, 1951, for providing long term financial support to tiny, small scale and medium scale industries in the State of Rajasthan but actually it was inaugurated on 8th April, 1955. The Delhi Financial Corporation (DFC) was constituted under a notification of Delhi Government in the year 1966-67 under Section 3(1) of the State Financial Corporation Act, 1951. The corporation provides term loans to small and medium scale industries in the National Capital Territory (NCT) of Delhi and Union Territory (UT) of Chandigarh. In NCT of Delhi, the corporation does not provide financial assistance to new medium scale industries. The corporation is responding to the changing economic scenario in a positive manner. The corporation is engaged in various activities viz. providing loans under various schemes, assets financing and fee-based activities.

#### **Objectives of the Study**

- The object of financial statement analysis is to establish the relationship between the different components of the statements.
- The objective of the study is to analyze the financial performance by way of horizontal analysis with the help of financial statement analysis tool.
- To examine the profitability position of the company.
- To examine, analyze and evaluate the profitability.
- To suggest measures to increase profitability.

#### **Scope the Study**

At present there are 18 State Financial Corporations operating in India. Out of 18 State Financial Corporations, RFC and DFC are taken for the study.

- The critical scope of the study is confined with the study of available financial statement of RFC and DFC.
- The present study is intended to cover a period of 6 years from 2008-09 to 2013-14 for profitability analysis.
- The study is limited to the profitability performance of the RFC and DFC.

#### **Research Methodology of the Study**

The study is carried in the RFC and DFC more specifically to examine financial statement and analysis. The analysis is worked out by using various sources of data collected. As stated in the need and scope of the study, two SFC's namely RFC and

DFC operating in Northern India have been selected for the purpose of study. The study has been based on secondary data. The main sources of the secondary data were published annual reports, manuals, pamphlets and other printed literature of these institutions along with unpublished work of various researchers available in these institutions. The data collected from primary and secondary sources was edited, classified and tabulated to make it fit for further analysis. In order to study, the financial statement analysis is done by:

- Comparative statement analysis, and
- Ratio analysis as an accounting technique is used in a study.

### **Limitations of the Study**

Statements like comparative statements are computed from historical accounting records, so they possess limitations and weakness which is been possessed by accounting records process. Ratio analysis is based on financial statements which are themselves subject to the several limitations therefore any ratio analysis based on such statement suffers from similar limitations. This paper limits only financial performance of the RFC and DFC for 6 years period, i.e., from 2008-09 to 2013-14.

### **Review of Literature**

State Financial Corporations are an important area of finance and research in the past as well as in the present. Empirical studies have been conducted covering the performance evaluation through profitability analysis. The significance of state financial corporations is continuously increasing as there is no suitable substitute of it. During selecting topic of research it came to my notice that mainly following types of literature is available in the field of finance.

**Raj Bhanwar Singh Purohit (2001)** view that poor follow-up, feedback and ineffective recovery are the real causes of the low profitability of the SFCs. This problem is more in respect of RFC since its profitability has been adversely affected as a result of mounting over-dues. Over the years, the recovery aspect has not been given the consideration it deserves, which has resulted in increasing the over-dues. Purohit opines that profitability and control are the two important things without which no industrial organization can think of its survival. Profit making is closely linked with the quality of control functions.

**B. Appa Rao and Kameshwari Chinta (1994)** examine the over-dues system in the APFFC. The problem of increasing over-dues is the most complex of all problems of the DFIs. Further, the consequences of over-dues have been mounting year by year and have been steadily eroding the financial soundness of the FIs. Everything possible should be done to reduce the high magnitude of over-dues and suit-filed debts. The study suggests a more effective management of the same for the successful existence of the DFIs.

**Rao (2009)** et al. examines the recovery performance of the State Financial Corporations. They have found that the bulk of funds of State Financial Corporations are blocked in over dues and the large portion of over dues is older than five years or more. They have made efforts to find out the factors responsible for defaults and

pointed out that effective follow-up and supervision of assisted units would need to be strengthened by State Financial Corporations.

#### **Functions of State Finance Corporations**

- The SFCs grant loans mainly for acquisition of fixed assets like land, building, plant and machinery.
- The SFCs provide financial assistance to industrial units whose paid-up capital and reserves do not exceed 3 crore (or such higher limit up to 30 crore as may be specified by the central government).
- The SFCs underwrite new stocks, shares, debentures etc., of industrial concerns.
- The SFCs provide guarantee loans raised in the capital market by scheduled banks, industrial concerns, and state co-operative banks to be repayable within twenty years.

#### **Profitability Analysis**

Profitability analysis helps in critically analysing and interpreting the current and prospective earning capacities of business firms. It, rather becomes more important when within the business there is an earning goal that helps to guide the behaviour of managers and other employees. It also helps the external users of accounting information relating to a particular business concern, viz. Bondholders, shareholders, potential investors, bankers and other creditors and numerous governmental agencies in maintaining its economic health by its net earnings. The principal yardsticks generally used to arrive at the degree of profitability of an organization are the following ratios:

- Ratio of Gross Profit to Total Revenue.
- Ratio of Net Profit to Total Revenue.
- Ratio of Operating Profit to Operating Revenue.
- Ratio of Net Profit to Capital Employed.
- Ratio of Return on Net Worth.

It is important to note that these different yardsticks represent a progressive analysis of profitability and constitute its integrated study. The inter-relationship of these yardsticks is significant for the purpose of analysis.

#### **Ratio of Gross Profit to Total Revenue**

The gross profit ratio expresses the relationship of gross profit on sales or net sales. The gross profit margin reflects the efficiency with which management produces each unit of product.

**Table 1 Ratio of Gross Profit to Total Revenue of Financial Corporations**

(In Percentage)

| Corporations                          | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Rajasthan Financial Corporation (RFC) | 30.67   | 30.33   | 29.42   | 40.01   | 48.13   | 57.75   |
| Delhi Financial Corporation (DFC)     | 63.82   | 52.67   | 51.22   | 48.78   | 63.20   | 66.83   |

Source: Computed and compiled from Annual Reports and Accounts of the Corporation for the year 2008-09 to 2013-14

### Interpretation

Table 1 presents comparative study of the gross profit ratio of the two financial corporations. On the basis of this table, it can be said that gross profit ratio of the Delhi Financial Corporation presents a high percentage of gross profit to the total income amongst the three financial corporations. In the first year of study period, the gross profit of Delhi Financial Corporation was 63.82 percent and it was 66.83 percent in the last year of the study period. Thus, it has registered an increasing trend. In the case of Rajasthan Financial Corporation it was 30.67 percent in the first year of the study period which increased to 57.75 percent in the last year of the study period with almost stable ratio in 2009-10 and 2010-11. Thus the gross profit ratio has witnessed an upward trend.

### Inference

This ratio of the corporations can be regarded quite satisfactory because in such a case the company can easily recover its operating expenses.

- **Ratio of Net Profit to Total Revenue**

Net profit ratio shows the relationship between net profit and sales as well as managerial efficiency towards manufacturing, administering and selling the product. The net profit ratio is used to judge firm's overall ability to turn each rupee of sales into net profit. A business concern will fail to achieve satisfactory return on shareholders fund if the amount of net profit is not adequate. Net profit margin is a good indicator of the efficiency of a business firm.

**Table 2 Ratio of Net Profit Ratio to Total Revenue Financial Corporations**

(In Percentage)

| Corporations                          | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Rajasthan Financial Corporation (RFC) | 0.69    | 1.84    | 0.69    | 1.43    | 3.31    | 6.20    |
| Delhi Financial Corporation (DFC)     | 26.86   | 21.41   | 15.86   | 17.04   | 29.73   | 25.87   |

Source: Computed and compiled from Annual Reports and Accounts of the Corporation for the year 2008-09 to 2013-14

### Interpretation

Table 2 indicates the net profit ratio of the three financial corporations. On the basis of this ratio and the gross profit ratio it can be said that the profitability of the Delhi Financial Corporation has been the best amongst the three financial corporations. The net profit ratio of the Delhi Financial Corporation has always exceeded 20 percent except in the year 2010-11 and 2011-12 when it was 15.86 percent and 17.04 percent respectively. The net profit ratio of the Rajasthan Financial Corporation had been positive during the period of study and it was below 10 percent during study period and it was modest at 0.69 percent in the year 2008-09 and 2010-2011.

### Inference

The net profit ratio of DFC is quite satisfactory, but net profit ratio of RFC is not good enough. So RFC should control its indirect expenses to increase the net profit.

- **Ratio of Operating Profit to Operating Revenue**

The operating ratio is computed to express cost of operations excluding financial charges in relation to sales. Corollary of it is operating profit ratio. It helps to analyse the performance of business and throws light on the operational efficiency of the business. Lower operating ratio is a very healthy sign.

**Table 3 Ratio of Operating Profit to Operating Revenue of Financial Corporations**  
(In Percentage)

| Corporations                          | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Rajasthan Financial Corporation (RFC) | 26.41   | 27.10   | 27.44   | 37.24   | 48.04   | 57.66   |
| Delhi Financial Corporation (DFC)     | 68.49   | 53.27   | 52.33   | 51.57   | 64.79   | 68.26   |

Source: Computed and compiled from Annual Reports and Accounts of the Corporation for the year 2008-09 to 2013-14

### Interpretation

Table 3 presents the operating profit ratio of the three financial corporations. On the basis of this table, it can be concluded that the profitability performance of the Delhi Financial Corporation has been far better than the profitability performance of the Rajasthan Financial Corporation. The table shows that the operating profit ratio of Delhi Financial Corporation was more than 50 percent in period of study. In case of Rajasthan Financial Corporation the operating profit ratio was around 27 percent during first three years of study but onwards it was more than 35 percent with increasing trend.

### Inference

Operating profit ratio of DFC is quite satisfactory, but RFC should control its operating expenses to increase its operating profit ratio.

- **Ratio of Net Profit to Capital Employed**

The primary objective of making investment in any business is to obtain adequate return on capital invested. Therefore, to measure the overall profitability of the firm, it is essential to compare profit with capital employed. With this objective, return on capital employed is calculated. It is also called 'Return on Investment' (ROI).

**Table 4 Ratio of Net Profit to Capital Employed of Financial Corporations**  
(In Percentage)

| Corporations                          | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Rajasthan Financial Corporation (RFC) | 0.13    | 0.42    | 0.16    | 0.26    | 0.62    | 1.45    |
| Delhi Financial Corporation (DFC)     | 5.97    | 3.90    | 2.70    | 3.83    | 4.96    | 5.25    |

Source: Computed from Annual Reports and Accounts of the Corporation for the year 2008-09 to 2013-14

### Interpretation

Table 4 indicates the ratio of net profit to capital employed of the three financial corporations. On the basis of the table, it can be said that the profitability

performance of the Delhi Financial Corporation is better than that of the other two financial corporations. The ratio of net profit to capital employed in case of the Rajasthan Financial Corporation has been shown positive but very little below 2 percent during the period of study.

#### **Inference**

The return on capital employed is very low in RFC and average in DFC . So both the corporations should control its operating and non operating expenses to increases its return on capital employed.

#### **Ratio of Return on Net Worth**

The primary objective of making investment in any business is to obtain adequate return on capital invested. Therefore, to measure the overall profitability of the firm, it is essential to compare profit with capital employed. With this objective, return on capital employed is calculated. It is also called 'Return on Investment' (ROI). This ratio expresses the relationship between profit and capital employed.

**Table 5 Ratio of Return on Net Worth Financial Corporations**

**(In Percentage)**

| <b>Corporations</b>                   | <b>2008-09</b> | <b>2009-10</b> | <b>2010-11</b> | <b>2011-12</b> | <b>2012-13</b> | <b>2013-14</b> |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Rajasthan Financial Corporation (RFC) | 9.30           | 20.2           | 6.58           | 12.70          | 24.50          | 25.40          |
| Delhi Financial Corporation (DFC)     | 9.89           | 8.12           | 6.41           | 6.85           | 11.15          | 9.36           |

Source: Computed and compiled from Annual Reports and Accounts of the Corporation for the year 2008-09 to 2013-14

#### **Interpretation**

Table 5 indicates the return on net worth of two financial corporations. In this table net worth means paid up capital plus reserves and surplus. Hence, in other words this ratio on capital employed or equity. On the basis of the table the return on net worth in case of Rajasthan Financial Corporation was better during the study period. The profitability performance of the Delhi Financial Corporation was good and more than 6 percent with a fluctuating trend. It is advised that the Rajasthan Financial Corporation has to maintain its growing track of improvement for the betterment of the corporation whereas the Delhi Financial Corporation should improve their profitability performance.

To Sum up, as a whole, on the basis of inter-company comparison, it can be said that the net profit position of DFC was the best because its profit margin was highest among corporations under study, RFC was satisfactory because it can overcome operating expenses easily but it should be improved as the average profit was not remarkable, while the management of RFC and DFC should strengthen their efforts to improve their condition which was not satisfactory because the ratio was very low for these companies. All the above tests are applied not only to measure the overall performance but also the profitability of various lines and the performance of the various sections of corporations. The analysis of profitability by operating sections

or by product lines is often used in conjunction with the decentralization of responsibility.

#### **Problems of State Financial Corporations**

- **No Independent Organization:** All SFCs are dependent upon the state government rules and regulations. SFCI Act 1951 is showed just in books. But SFCs' problem is that these institutions all decision are dependent on political environment of state. Due to this, loan is not available on the time for right person.
- **Corruption:** Like other government office in India, we can also find the evil of corruption in state financial corporation. Hoarding of wealth and money, SFCs' officer aim has become to earn by good or bad way. That is the main problem that these institutions have no transparency like banks.
- **Effect of World Bank and WTO Policies:** All most all SFCs in India are tie up with World Bank and WTO agreement. Due to this, these institutions' decisions are affected with World Bank and WTO policies. World Bank can easily give pressure for accepting his policies. It may also affect Indian small scale industry adversely.
- **Low Return from Investment in Small Scale Industry :** It is said that state financial corporation has given 70% loan to small scale industry. So, its ROI is very low on loan to SSI.
- **Long Gestation Period:** SFCs have also one problem, which we can say in the form of long gestation period. Small scale businessmen do not repay their loan on the time and large number of loan has been converted into bad debt. So, SFCs are suffering losses from many years.

#### **Conclusions**

- The RFC and DFC will have to reduce the operating expenses to improve the profitability.
- The corporations will have to frame good credit policy to speed up the collection period.
- The corporations has to maintain consistency levels all through its policies to attain consistent financial performance.

#### **Suggestions**

The State Financial Corporations which were set up for speedy industrialization in the respective State have played a pivotal role in development of industry in the states. Thus, SFCs have been instrumental in industrialization and fulfilling of various social obligations of the state like economic development, empowerment of weaker sections, and generation of employment, development of small-scale and cottage industry, balanced regional development, entrepreneurial development, development of backward areas etc. It is difficult to imagine the course of economic growth which has taken place in the states without the significant contribution made by these financial institutions. Today the situation has come to such a passé that due to its social duties, the financial position of majority of these Corporations are in a bad



shape. The State Financial Corporations(SFCs) should earn sustainable profit , otherwise SFC can't survive . SFCs will have to reduce the operating expenses to improve the profitability. The corporations will have to frame good credit policy to speed up the collection period. ) The corporations has to maintain consistency levels all through its policies to attain consistent financial performance.

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## INDIAN ACCOUNTING STANDARDS CONVERGED WITH IFRS (IND AS) : AN OVERVIEW

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### Abstract

The world is getting smaller and smaller, globalization has made it possible to accept the world as one market. To standardize the diverse accounting policies & practices & with a view to eliminate to the extent possible the non comparability of financial statements & to add reliability of financial statements, Accounting Standards are prepared. Application of a single set of accounting requirements has increased the comparability of different entities. This is the reason why more than 120 countries are following global accounting standards i.e. International Financial Reporting Standards (IFRS). In India, the need of Accounting Standards was recognized by The Institute of Chartered Accountants of India & therefore, it constituted an Accounting Standards Board on 21st April 1977. The Board has continuously issued accounting standards in various areas as applicable to business houses. At the same time, it has also revised the existing Accounting Standards as per the need of changing scenario. India made a commitment towards the convergence of Indian accounting standards with IFRS at the G20 summit in 2009. To become an IFRS-converged country as committed by it, India has to adopt the IFRS. But the ICAI, the premier body established by an act of Parliament has now issued IND ASs (Indian Accounting Standards) which are converged and now at par with IFRS. The ICAI, MCA and Government are all set and ready to implement those converged IND ASs in the country. Therefore, in this article an overview of Indian Accounting Standards converged with IFRS (IND AS) has been discussed.

**Keywords:** IFRS, IFRIC, ICAI, ASB, NBFCs, SIC, MCA, G20, IND AS, IASB, Globalization.

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## Introduction

The organisation communicates its Financial Position using financial statements and reports. For any communication to be effective and efficient, the language must be the same. It will be difficult to communicate if the language is different i.e. comparing, analysing, etc. of Financial statements of different organisation will be difficult. The problem of uniform reporting of Financial Statement had overcome by introduction of common set of Standards known as Accounting Standards. Accounting standards are written policy documents issued by expert accounting body or by government or other regulatory body covering the aspects of recognition, measurement, treatment, presentation and disclosure of accounting transactions in the financial statements. In India, Local standards are known as Accounting Standards (AS) issued by Accounting Standard Board (ASB) in consultation with Institute of Chartered Accountants of India (ICAI).

**IFRS** is a globally recognised set of Standards for the preparation of financial statements by business entities. IFRS refers to the entire body of IASB pronouncements, including standards and interpretations approved by the International Accounting Standard Board (IASB) & IASs and SIC interpretations approved by the predecessor International Accounting Standards Committee (IASC). Basically, IFRS consist of:

- 13 International Financial Reporting Standard (IFRS)
- 28 International Accounting Standard (IAS)
- 15 International Financial Reporting Interpretation committee (IFRIC) Interpretations
- 9 Standard Interpretation Committee (SIC) Interpretation

**Indian Accounting Standards Converged with IFRS (IND AS):** IND AS are set of accounting standards notified by Ministry of Corporate Affairs (MCA), converged with International Financial Reporting Standards (IFRS), these accounting standards are formulated by Accounting Standard Board (ASB) of Institute of Chartered Accountants of India (ICAI). Convergence means alignment of the standards of different standard setters with a certain rate of compromise, by adopting the requirements of the standards either fully or partially. Indian Accounting Standards are almost similar to IFRS but with few carve outs so as to make them suitable for Indian Environment.

## Literature Review

Indian Accounting Standards converged with IFRS are issued recently and there are very few literature available on the same. As the base is IFRS, one has to refer literature available on IFRS. Rare studies have been carried out in countries all over the world analyzing the data. Many researchers have found that the adoption of IFRS had a positive impact on entities, financial reporting and wider economic settings.

Daske et al. (2008) found that firms adopting IFRS in the year of mandatory adoption experience large increases in market liquidity but mixed results for the cost of capital.

Stent et al. (2010) found that adoption of IFRS in New Zealand led to a significant increase in liabilities and a decrease in equity for private sector entities. Adjustments to income taxes, employee benefits and financial instruments were the main reasons for increases in liabilities and decreases in equity.

In the paper on convergence of Domestic Accounting Standards and IFRS, it was demonstrated that the influence of Multinational Enterprises and large international accounting firms can lead to transfer of economic resources in their favor, wherein the public interests are usually ignored. Chand & White (2007). Under this study why there is heterogeneity in countries' decisions to adopt IFRS; in other words, why some countries adopt IFRS while others do not, Author focused his analysis on a sample of 102 non-EU countries, excluding the EU because of its closeness to the IASB.

Karthik Ramanna (2009) Ensuring a high quality corporate financial reporting environment depends on effective Control & Enforcement Mechanism. Merely adopting International Financial Reporting Standards is not enough. Each interested party, namely Top Management and Directors of the Firms, Independent Auditors and Accountants and Regulators and Law Makers will have to come together and work as a team for a smooth IFRS adoption procedure.

Dr. H. S. Patange (2012) In the article GAAP & IFRS, it was concluded that it would be necessary to understand some of the qualitative as well as Procedural differences between the two. An analysis of differences Between Indian GAAP and IFRS.

Shamnani Gopichand B (2012). There are so many aspects relating to IFRS convergence which still need to be clarified, such as IFRS first time adoption standard, compliance of comparative previous period figures with IFRS, changes required to the Companies Act to comply with IFRS, changes to the Income-Tax Act, the Reserve Bank of India's requirements for banks, etc. Dr. Kishori J. Bhagat (2012) The real estate industry continues to be a good example of the differences that can arise from the application and interpretation of apparently straightforward accounting standards.

### **Objectives of the Study**

- To study the implementation procedure of IND ASs.
- To Study impact on reporting by Indian Companies in the process of Convergence to IFRS.

### **Hypothesis**

**H0<sub>1</sub>** : There is no association between quality of financial information disseminated and adoption of converged IND AS.

**H0<sub>2</sub>** : There is no need to make appropriate changes in financial reporting & disclosures by the Indian corporate due to convergence to IFRS .

### **Research Methodology**

For the purpose of the present study, mainly literature survey and secondary data has been used. The required secondary data was collected from the authorized

Annual Reports and Official Website of ICAI and IFRS, various Journals and Research Papers, reports and newspaper articles have been surveyed in making this study.

### **Applicability of Indian Accounting Standards (IND AS)**

Till now, MCA has notified 39 Ind AS. Below is the list of Ind AS Notified by MCA:

- Indian Accounting Standard (Ind AS) 101 First-time Adoption of Indian Accounting Standards
- Indian Accounting Standard (Ind AS) 102 Share-based Payment
- Indian Accounting Standard (Ind AS) 103 Business Combinations
- Indian Accounting Standard (Ind AS) 104 Insurance Contracts
- Indian Accounting Standard (Ind AS) 105 Non-current Assets Held for Sale and Discontinued Operations
- Indian Accounting Standard (Ind AS) 106 Exploration for and Evaluation of Mineral Resources
- Indian Accounting Standard (Ind AS) 107 Financial Instruments: Disclosures
- Indian Accounting Standard (Ind AS) 108 Operating Segments
- Indian Accounting Standard (Ind AS) 109 Financial Instruments
- Indian Accounting Standard (Ind AS) 110 Consolidated Financial Statements
- Indian Accounting Standard (Ind AS) 111 Joint Arrangements
- Indian Accounting Standard (Ind AS) 112 Disclosure of Interests in Other Entities
- Indian Accounting Standard (Ind AS) 113 Fair Value Measurement
- Indian Accounting Standard (Ind AS) 114 Regulatory Deferral Accounts
- Indian Accounting Standard (Ind AS) 115 Revenue from Contracts with Customers
- Indian Accounting Standard (Ind AS) 1 Presentation of Financial Statements
- Indian Accounting Standard (Ind AS) 2 Inventories
- Indian Accounting Standard (Ind AS) 7 Statement of Cash Flows
- Indian Accounting Standard (Ind AS) 8 Accounting Policies, Changes in Accounting Estimates & errors
- Indian Accounting Standard (Ind AS) 10 Events after the Reporting Period
- Indian Accounting Standard (Ind AS) 12 Income Taxes
- Indian Accounting Standard (Ind AS) 16 Property, Plant and Equipment
- Indian Accounting Standard (Ind AS) 17 Leases
- Indian Accounting Standard (Ind AS) 19 Employee Benefits
- Indian Accounting Standard (Ind AS) 20 Accounting for Govt. Grants and Disclosure of Govt. Assistance
- Indian Accounting Standard (Ind AS) 21 The Effects of Changes in Foreign Exchange Rates
- Indian Accounting Standard (Ind AS) 23 Borrowing Costs
- Indian Accounting Standard (Ind AS) 24 Related Party Disclosures

- Indian Accounting Standard (Ind AS) 27 Separate Financial Statements
- Indian Accounting Standard (Ind AS) 28 Investments in Associates and Joint Ventures
- Indian Accounting Standard (Ind AS) 29 Financial Reporting in Hyperinflationary Economies
- Indian Accounting Standard (Ind AS) 32 Financial Instruments: Presentation
- Indian Accounting Standard (Ind AS) 33 Earnings per Share
- Indian Accounting Standard (Ind AS) 34 Interim Financial Reporting
- Indian Accounting Standard (Ind AS) 36 Impairment of Assets
- Indian Accounting Standard (Ind AS) 37 Provisions, Contingent Liabilities and Contingent Assets
- Indian Accounting Standard (Ind AS) 38 Intangible Assets
- Indian Accounting Standard (Ind AS) 40 Investment Property
- Indian Accounting Standard (Ind AS) 41 Agriculture

#### **Applicability of IND AS**

As per the notification released by the Ministry of Corporate Affairs (MCA) on 16 February 2015, the roadmap for Ind AS implementation is as follows:

| <b>Financial Year</b> | <b>Mandatorily Applicable To</b>                                                                       |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| 2016-17               | Companies (listed and unlisted) whose net worth is equal to or greater than 500 crores INR             |
| 2017-18               | Unlisted companies whose net worth is equal to or greater than 250 crores INR and all listed companies |
| 2018-19 onwards       | When a company's net worth becomes greater than 250 crore INR                                          |
| 2015-16 or later      | Entities, not under the mandatory roadmap, may later voluntarily adopt IND AS                          |

Whenever a company gets covered under the roadmap, IND AS becomes mandatory, its holding, subsidiary, associate and joint venture companies will also have to adopt IND AS (irrespective of their net worth). Net worth means the aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

IND AS will apply to both consolidated as well as standalone financial statements of a company. While overseas subsidiary, associate or joint venture companies are not required to prepare standalone financial statements under IND AS, they will need to prepare IND AS adjusted financial information to enable consolidation by the Indian parent. Presently, insurance companies, banking companies and non-banking finance companies (NBFCs) are not required to apply IND AS. The IND AS rules are silent when these companies are subsidiaries, associates or joint ventures of a parent covered under the roadmap. It appears that these

companies will need to report IND AS adjusted financial information to enable consolidation by the parent. In case of conflict between IND AS and the law, the provisions of law will prevail and financial statements are to be prepared in compliance with the law.

### **Advantages of Adopting Converged IND AS**

The adoption of IFRS for financial reporting purposes have benefitted world economies. The past studies and researches have suggested several benefits of adopting IFRS. The implementation of IFRS leads better financial information for both shareholders and regulators, it enhances comparability, improves transparency of recorded results, enhances ability to secure global listing, managing the global operations and reduced cost of capital. Its benefits can be summarized as below:

- **Better Comparability:** By following a common set of standards, will help the stakeholders to compare the organizations globally, i.e. to create an apple to apple comparison.
- **Better Transparency:** The users of accounts will be benefited by this as, same accounting standards will help to them understand the fundamentals of the organisation which will generate better transparency.
- **Better Access to cross-border Capital Market:** Many companies having subsidiary or Holding company in different countries are required to follow dual set of accounting standards, local standards on one hand & global standards on the other hand. The transition will be helpful in saving time & cost on the finance department.
- **Attract Foreign Investment:** Since the investors can compare with other organisations globally, it will help them to take investment decision, at the same time it will help the organisation to present their financial position in more efficient way to the world, in a language that all can understand.
- **Employment Opportunities:** Due to transition many companies will be attracted towards India, for investing, for setting up subsidiary, etc., which will result in increase in employment opportunities.
- **Globalization:** Smooth trade can be achieved. Listing of Securities on international Stock Exchanges will be eased. Cross border flow of investment will lead to economic growth. Stakeholder can easily take the decision in regards to the organization.
- **Cost Saving:** Saving of time and money in planning and executing of accounting and auditing. Costs involved in the access to the capital market are expected to reduce. In developing countries, the labor cost is cheap, but capital availability is difficult. By convergence the cost of capital will reduce & its availability will also be eased.

### **Problems and Challenges**

Every change is painstaking. In spite of several benefits, there are some challenges that will be faced on the way of IFRS convergence by the Indian corporate which are as follows:

- **Rules & Regulations:** Since there are many Rules & Regulations in India, for implementation of IND AS the appropriate amendment must be done in the Rules & Regulations.
- **Technological Aspect:** Right now, book keeping and accounting is done through software like, Tally, Miracle, Busy, SAP, etc.; these accounting software's are based on Indian GAAP & AS. There will be a huge cost to invest in such upgraded software.
- **Personnel:** There is lack of efficient personnel related to new accounting standards. However, it can be avoided by Training & Awareness programs.
- **Basis or Concept:** The application of fair value concept in place of historical concept.

#### **Actions Required to Face the Challenges**

- To provide instance guidance on accounting issues and problems, the ICAI should issue guidance notes on the matters where accounting professionals will have dilemma.
- To undertake necessary changes required in various statutory provisions, task force should be formed to suggest amendments in existing provisions.
- To facilitate education of members, ICAI should educate members by conducting seminars and courses. It has been started to some extent.
- To solve queries of members, ICAI should form region wise expert advisory committees.

#### **Is IND AS the same as the IFRS issued by IASB?**

I IND AS is not the same as IFRS. It is a separate accounting framework based on IFRS as created by the MCA and has certain carve-outs from IFRS. Following are some of the key carve-outs in IND AS vis-à-vis IFRS as issued by IASB:

- IFRS 1 defines the previous GAAP as the basis of accounting that a first-time adopter used immediately before adopting IFRS. However, IND AS 101 defines the previous GAAP as the basis of accounting that a first-time adopter used for its reporting requirement in India immediately before adopting IND AS. The change makes it mandatory for Indian entities to consider the financial statements prepared in accordance with existing notified Indian accounting standards as was applicable to them as previous GAAP when it transitions to IND AS.
- IND AS provides an option to continue with the policy adopted for accounting for exchange differences arising from the translation of long-term foreign currency monetary items recognized in the financial statements for the period ending immediately before the beginning of the first IND AS financial reporting period as per the previous GAAP. Under IFRS, such exchange difference is charged to the income statement.
- IND AS states that where the exercise price for the conversion of the Foreign currency convertible bonds (FCCB) is fixed, irrespective of any currency, it is to be classified as equity rather than as an embedded derivative. IFRS on the other



hand, requires that where the conversion of bond into equity shares is fixed, but the exercise price for such conversion is defined in currency other than the functional currency of the entity, the conversion aspect is to be accounted as embedded derivative.

- Keeping in mind the Indian inflationary situation, IND AS states that the straight lining of lease rentals may not be required in cases where periodic rent escalation is due to inflation. IFRS does not provide an exception to straight lining of lease rentals where rent escalation is due to inflation.
- IND AS permits (subject to limited exceptions around change in functional currency) an entity to use carrying values of all property, plant and equipment as on the date of transition to IND AS, in accordance with the previous GAAP, as an acceptable starting point under IND AS. IFRS does not provide a similar option on first-time adoption.
- IFRS 3 requires bargain purchase gain arising on business combination to be recognized in profit or loss. IND AS 103 requires the same to be recognized as other comprehensive income and accumulated in equity as capital reserve, unless there is no clear evidence for classifying the business combination as a bargain purchase. In this case, it is to be recognized directly in equity as capital reserve.
- Consequent to the changes made in IND AS 1, it has been provided in the definition of 'Events after the reporting period' that in case of breach of a material provision of a long term loan arrangement on or before the end of the reporting period with the effect that the liability becomes payable on demand on the reporting date, if the lender, before the approval of the financial statements for issue, agrees to waive the breach, it shall be considered as an adjusting event. Under IFRS, these breaches will result in classification of loan as current instead of non current.

### **Conclusion**

The preparation of IFRS-converged standards is a challenge before the preparers both in India and outside. For smooth implementation of IFRS converged IND AS, ICAI and regulatory bodies are taking several measures. The need is to have a systematic procedure for first time implementation of the newly issued converged IND AS. Corporate houses need to gear themselves for continuous updating. The regulatory bodies should ensure changes in existing Companies Act, Taxation, Foreign Exchange Management Act, Banking Regulation Act and Insurance Act etc. these changes will be beneficial to line up Indian Accounting Practices with converged Standards. The implementation of IFRS leads better financial information for both shareholders and regulators, it enhances comparability, improves transparency of recorded results, ability to secure global listing, managing the global operations and reduced cost of capital. The same accounting standards will help outsiders in understanding the fundamentals of the organisation which will generate better transparency. Hence, there is positive association between quality of financial information disseminated and adoption of converged IND AS.

With a view to make sure adoption of first time adoption of converged standards in India, skilled and trained professional accountants and auditors are required in large numbers. The ICAI has taken initiatives to arrange the training programmes for its members and other parties. To ensure that all the corporate houses are complying with adoption procedure, Indian regulators and Accounting Body (ICAI) should have Financial Reporting Compliance Monitoring Board. The transition to IFRS may cause short term hindrances, but in the long run, the benefits of investments and consistency will definitely outweigh the costs and other challenges. IFRS converged statements will enable entities to recognise their market standing and credibility beyond country and regional milestones. This will facilitate companies to set targets and milestones based on global business environment, rather than merely local ones. Hence, there is an urgent need to make appropriate changes in financial reporting & disclosures by the Indian Corporate due to convergence to IFRS.

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- ✧ [www.fasb.org](http://www.fasb.org)



## VALUE ADDED : AN OVERVIEW

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Dr. Bharat Lal Gupta\*\*

### Abstract

Value added statement is a technical device design to highlight the utility or value added in the raw materials used by the business organization during the course of production or manufacture. The business organization uses raw material which is normally purchased from outsiders. In this raw material which is normally purchased from outsiders. In these raw materials the concern adds utility by converting it into finished goods. During the course of conversion of raw materials into finished good, the organization applies labour incurs overhead expenses and management works to supervise the entire work. However, in all the production process money is used which is provided by shareholders as well as by the lenders. The government provides basic facilities and conducive environment to work. Therefore, the value is added in the raw material by (i) employees, (ii) providers of capital (a) internal or (b) external and (iii) government. This article highlights the concept of value added in the present scenario.

**Keywords:** *Value Added, Overhead Expenses, Shareholders, Lenders, Conducive Environment.*

### Introduction

In accounting language, value added represents the excess of sales revenue and income from services over the cost of bought in goods and services purchased from outsiders. The concept of value added is useful for managerial decision making and is considered as an appropriate approach to measure the operating efficiency and profitability of a business organization. It is considered as a rod for measuring the wealth created by an enterprise and hence the success of a business unit. Definitions of different scholars would make the term 'Value added' more clear. AS stated by Brown and Howard' "Value added is sales value less the cost of bought in goods and

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services used for producing those sales.” According to Lewis and Pendrill, “value added may be calculated as the difference between the value of goods or services produced by the team, i.e., sales revenues, less the value of goods and services purchased from outsiders, i.e., the cost of bought in materials and services.” As stated by John Sizer, “Value added is the wealth the company has been able to create by its own and its employee’s efforts during a period.” He further adds, “It is out of the Value Added Cake that a company rewards its various stakeholders, i.e., shareholders, directors, managers, employees, Inland Revenue etc.”

In the words of Roger Brayout, “Value added is the wealth the reporting entity has been able to create by its own and its employee’s efforts. This statement would show how value added has been used to pay those contributing to its creation.” According to the Department of Commerce, United States in the following words, “Value Added by Manufacture is calculated by subtracting the cost of materials, suppliers and containers, fuel purchased electric energy and contract work from the total value of shipments. In that it approximates the value created in the process of manufacture, value added provides the most satisfactory measure of the relative economic importance of given industries in the census of manufacturers.” The economists opined that the national income is aggregate of all goods and services produced by the nation as a whole during a year. But, to avoid the chances of double counting i.e., counting the same piece of income for more than once, the idea of measuring only the values generated by each individual unit has been evolved. This very idea has lead to the ‘value added concept’ of income.

In the ICMA terminology, the term value added is defined as: The increase in the market value resulting from an alteration in the form, location or availability of a product or service, excluding the cost of bought out materials or services. This concept may be presented in equation form as follows:

Value added = Value after alteration – Value before alteration

In the Kohler’s Dictionary for Accountants, “Value added is that part of the cost of a manufacture or semi-manufactured product attributable to work performed on constituent raw material”. As such, the value is arrived at by deducting from the total value of the output of a firm and other incomes, the cost of raw materials, power and fuel, water etc. which are bought from other firms. This may be represented through the following equation:

Value Added = (Value of Output + Income from other sources)  
- (Cost of Materials and Services purchased from outsiders)

Thus, the figure of value added is obtained by deducting the cost of bought in goods and services purchased from outside from the sales revenue plus income from other sources.

### **Importance of the Value Added**

Profit is a micro concept while value added is a macro concept. Therefore, the figure of profit measures the welfare of shareholders while the figure of value added measures the welfare of the society as a whole. The following are important uses of calculating value added:

- It measures the social welfare as well as it shows categorically the distribution of value added which in turn shows segment wise of the society.
- It helps to compare overall productivity of two or more companies of the same nature.
- It helps to major employee productivity and tells about the opportunity cost of various resources used to generate value.
- It helps to determine the areas where improvement in productivity is possible.
- It helps to forecast amount of resources needed for a particular level of activity thus it helps in preparing budgets.
- It is used in estimation of national income, with reference to manufacturing industries.

Value added helps in analyzing that an organization may survive without earning profit but cannot survive without adding value. Any business which is not making profit shall become sick but any business not generating value is an evil. The figure of value added is more important to measure, evaluate and judge the efficiency of a business organization than the figure of profit because it excludes those costs over which the concern has either no control or at best a little control. Thus, all the items constituting the value added statement namely employee cost, cost of infra-structural facilities, cost of capital, dividend and depreciation can be controlled to a large extent. Non-profit making organization would remain useful so long as they generate value. A sick unit may be considered useful so long it adds to the value. According to Gilchrist and Wood, to optimize added value is more meaningful than to optimize profit because added value determines the reward for employees as well as providers of capital.

### Forms of Value Added

As disclosed by the accounting concept of value added that value added is either in the form of gross value added or net value added. The Gross Value Added is the excess of sales plus income from services less amount of bought in materials and services purchased from the outsiders. But GVA cannot be claimed to be as total value generated. The value of services of fixed assets like plant and machinery etc. consumed during production of fixed assets (i.e., depreciation) is nothing but exhaustion of values previously generated. So, to arrive at the figure of Net Value Added (NVA) within a firm, values acquired from other units in past but consumed at present should be deducted from the gross value added. According to Adam Smith, their/inhabitants real wealth too is in proportion, not to their gross, but to their net revenue. It can be presented as follows:

|                                                                                 |            |
|---------------------------------------------------------------------------------|------------|
| <b>Sales</b>                                                                    | <b>xxx</b> |
| <b>Add :</b> Income from services                                               | xxx        |
| <b>Less :</b> Cost of bought in materials and services purchased from outsiders | xxx        |
| <b>GROSS VALUE ADDED (GVA)</b>                                                  | xxx        |
| <b>Less :</b> Depreciation                                                      | xxx        |
| <b>NET VALUE ADDED (NVA)</b>                                                    | xxx        |

### **Methods of Calculating Value Added**

Value added may be classified in the form of gross value added and net value added. B. Cox has suggested that the gross value added may be calculated by two methods viz., (i) additive method and (ii) subtractive method.

#### **Additive Method**

Additive method is also known as income method or income approach. In this method, the absolute figure of value added is arrived at by adding employee cost, depreciation, interest and profit before tax. It may be expressed as a formula in the following way :

Gross Value Added = Employee Cost + Depreciation + Profit Before Tax + Interest

Here employee cost includes wages, salaries and other benefits to the employees.

#### **Subtractive Method**

Under this method the cost of bought-in goods and services is deducted from the total of sales and income from services. In the shape of formula, it can be expressed as follows :

Gross Value Added = Sales revenue + Income from services  
- Cost of bought in goods and services

The net value added by a concern is shared by its three stakeholders is employees, providers of capital and the government. In other way, the figure of depreciation is subtracted from the figure of gross value added to arrive at the figure of net value added. As a formula it can be expressed like this:

#### **By Net Output Method**

Net Value Added = Gross Value Added – Depreciation

#### **By Income Distribution Method**

Net Value Added = Employee Cost + Remuneration to Providers of Capital  
+ Payment to the Government  
or

Net Value Added = Value added to Employees + Value added to Government  
+ Value added to Financer + Value added to Entity

### **Application of Value Added**

Application of value added indicates how that value added has been divided between employees, the government, the providers of the capital and a part of it is re-invested in the business.

- **To the Employees :** Employees are paid in the form of wages, salaries, bonus, travel concessions, welfare expenses, gratuity and company's contribution to the provident fund out of the value generated by their efforts. It represents total amount of remuneration and amenities provided to the employees.
- **To the Government:** The government is the provider of infrastructure facilities to the concern, therefore a share in value added has to be given to the government. It is paid in the form of income tax, excise duty, customs duty, sales tax, octroi, rates and taxes and other direct taxes. Export incentives, tax credits, subsidies, refund taxes and duties. Excess provision of tax is deducted from the share of government in the value-added.

- **To the Providers of Capital:** Capital can be acquired by different sources to meet the financial needs of a business viz. share holders (i.e., owned capital) and financial institutions (i.e., borrowed capital). Value belonged to financial institutions is paid in the form of interest on secured and unsecured borrowings and value belonged to the shareholders is paid in the form of dividend.
- **Re-investment in the Business:** The value remaining after all the outside parties have been paid off belongs to the entity itself and it is re-invested in the business in the form of depreciation and retained earnings. Retained earnings, here, means additions to reserves and surplus and Profit and Loss Account.

### Value Added Statement (VAS)

According to the Institute of Chartered Accountants of India, "Value added Statement reveals the value added by an enterprise which it has been able to generate and its distribution among those contributing to its generation are known as stake holders." In the words of John Sizer, "The value added statement shows the size of the 'value added cake' and how the 'cake' has been divided amongst the various stake holders." Value added statement can be prepared in report form. The following format may be used to prepare the value added statement:

#### Value Added Statement for the year ended 31st .....20.....

| Items                                                   | Rs         | Rs  |
|---------------------------------------------------------|------------|-----|
| <b>Generation of Value Added</b>                        |            |     |
| Sales revenue                                           | xxx        |     |
| Add: Income from services                               | xxx        | xxx |
| Less: Cost of bought in goods & services from outsiders | xxx        |     |
| <b>Gross Value Added</b>                                | <b>xxx</b> |     |
| Less: Depreciation                                      | xxx        |     |
| <b>Net Value Added</b>                                  | <b>xxx</b> |     |
| <b>Application of Value Added</b>                       |            |     |
| To pay employees                                        | xxx        |     |
| To pay government                                       | xxx        |     |
| To pay providers of capital                             |            |     |
| (i) <b>Lenders</b>                                      | xxx        |     |
| (ii) <b>Shareholders</b>                                | xxx        | xxx |
| <b>Retained earnings (excluding depreciation)</b>       | <b>xxx</b> |     |
| <b>Net Value Added</b>                                  | <b>xxx</b> |     |

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## युवाओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण-एक विश्लेषणात्मक अध्ययन

सुनीता \*

### सारांश

यह अध्ययन कन्या भ्रूण-हत्या की वर्तमान स्थिति एवं युवा पीढ़ी का उसके प्रति दृष्टिकोण से सम्बन्धित है। इस अध्ययन के द्वारा कन्या भ्रूण-हत्या की भयावहता को सामने लाने का प्रयत्न किया गया है। प्रस्तुत अध्ययन में वर्णनात्मक सर्वेक्षण विधि का प्रयोग किया गया है। कुल 600 न्यादर्श लिए गए हैं। अध्ययन में कन्या भ्रूण-हत्या के प्रति युवाओं के दृष्टिकोण को मापने के लिए स्वनिर्मित प्रश्नावली का प्रयोग किया गया है। ताकि आने वाले समय में कन्या भ्रूण-हत्या की दर को कम किया जा सकें।

### प्रस्तावना

प्राचीन काल से आधुनिक काल यानि वर्तमान समय तक भारत में स्त्रियों की स्थिति परिवर्तनशील रही है। स्त्रियों का शोषण सिर्फ पुरुष वर्ग ने ही नहीं किया, अपितु पुरुष से ज्यादा तो एक स्त्री ने दूसरी स्त्री पर या स्त्री ने खुद अपने ऊपर अत्याचार किया है। पुरुष की उदंडता, उच्छृंखलता और अहम के कारण या स्त्री की अशिक्षा, विनम्रता और स्त्री सुलभ उदारता के कारण उसे प्रताड़ित, अपमानित और उपेक्षित होना पड़ा।

**‘रायबर्न के अनुसार:** ‘स्त्रियों ने ही प्रथम सभ्यता की नींव डाली है और उन्होंने ही जंगलों में मारे-मारे भटकते हुए पुरुषों को हाथ पकड़कर अपने स्तर का जीवन प्रदान किया तथा घर में बसाया।’

भारत में सैद्धान्तिक रूप में स्त्रियों को उच्च दर्जा दिया गया है। हिन्दू धर्म में स्त्री को पुरुष की अर्धांगिनी कहकर संबोधित किया है। संसार की ईश्वरीय शक्ति – दुर्गा, काली, लक्ष्मी, सरस्वती आदि नारी शक्ति, धन, ज्ञान का प्रतीक मानी गयी है। इतना ही नहीं है, अपितु हम अपने दे ी को भारतमाता के नाम से संबोधित करते हैं। स्वतन्त्रता पश्चात् महिलाओं की स्थिति में काफी बदलाव आया है। भारतीय संविधान के अनुसार उन्हें पुरुषों के समकक्ष अधिकार दिए गए हैं। महिलाओं को आत्मनिर्भर बनाने के लिए उन्हें निःशुल्क शिक्षा व छात्रवृत्ति की व्यवस्था की गई। इसी कारण से आज जल, थल व वायु कोई भी क्षेत्र स्त्री शक्ति से अछूता नहीं है।

आज भी हमारे समाज में कन्या भ्रूण-हत्या, दहेज प्रथा व बाल-विवाह जैसी अनेक कुरीतियाँ व्याप्त हैं, जो मानवीय विकास में बाधक हैं। इन सामाजिक कुरीतियों को जड़ से मिटाने से ही समाज प्रगति के मार्ग पर अग्रसर हो सकता है। इन सामाजिक बुराईयों को व्यक्ति की सकारात्मक चेतना द्वारा ही हटाया जा सकता है।

### कन्या भ्रूण-हत्या

कन्या भ्रूण-हत्या से आशय है:- महिला के गर्भ में पल रहे शिशु के लिंग- परीक्षण के उपरान्त यदि गर्भ में पल रही शिशु कन्या है, तो जन्म लेने से पहले ही गर्भ को समाप्त कर देना।

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आज एक महत्वपूर्ण समस्या उन मासूम बच्चियों की है, जिन्हें इस दुनिया में जन्म लेने से पूर्व ही निर्दयतापूर्वक समाप्त कर दिया जाता है। इस प्रकार कन्या भ्रूण-हत्या महिलाओं के अधिकारों का उल्लंघन है। स्वतन्त्रता के बाद जहां सामाजिक, राजनैतिक, व्यवसायिक आदि क्षेत्र में महिलाओं की भागीदारी बढ़ी है, वहीं उनके अनुपात में कमी आयी है। इस प्रकार प्राकृतिक लिंगानुपात बिगड़ सा गया है। यदि इस प्रकार कन्या भ्रूण-हत्याएँ होती रही, तो लड़के और लड़कियों का अनुपात और अधिक बिगड़ता चला जायेगा। जिससे समाज में अव्यवस्था फैल जाएगी और यौन अपराध जैसे अनेकानेक घृणित कृत्य बढ़ने लगेंगे।

कन्या भ्रूण-हत्या एक सामाजिक अपराध है। इस अपराध के कारण न सिर्फ महिलाओं की संख्या में कमी आ रही है, अपितु कहीं न कहीं स्त्री-पुरुष अनुपात भी इससे प्रभावित हुआ है। जिससे सामाजिक अव्यवस्था सी उत्पन्न हो गई है।

### महिलाओं का लुप्त होना

हमारे गाँव, शहर, राज्य और देश से योजनाबद्ध ढंग से कन्या भ्रूण-हत्या कर कन्याओं को खत्म किया जा रहा है। विश्व स्वास्थ्य संगठन के अनुसार अब तक 10-11 करोड़ महिलाओं को खत्म किया जा चुका है। ये घटनाएँ नारी-जाति के अस्तित्व के मिटने की तरफ इशारा करती हैं। चाहे हम महिला सशक्तिकरण वर्ष मनाएँ या महिलाओं को आरक्षण दे या उनकी सुरक्षा के विषय में ढेर सारे कानून बनाएँ, परन्तु वास्तविकता तो यही है कि भ्रूण-रूप में महिलाएँ लुप्त होती जा रही हैं। इस विषय में केन्द्र एवं राज्य सरकारों को गंभीरता से चिंतन करना चाहिए। हमारे देश में प्रति वर्ष 20 लाख से अधिक कन्या भ्रूण-हत्याएँ की जा रही हैं। निजी अस्पतालों में अत्याधुनिक मशीनों से भ्रूण की जांच की जाती है। यदि भ्रूण कन्या का है तो उसे निर्दयतापूर्वक नष्ट कर दिया जाता है। इस घृणित कृत्य के बदले में एक मोटी रकम डॉक्टर द्वारा ले ली जाती है। यूनीसेफ की रिपोर्ट के अनुसार भारत में रोजाना 7000 कन्याओं की गर्भ में ही हत्या कर दी जाती है। भ्रूण की बेचारी माँ अपने ही खुद से बने भ्रूण की अपनी ही कोख में हत्या को देख मौन बनी रहती है। वह तो बिना पलक झपकाये, खुली आँखों से शून्य में देखती दिखाई देती है। वह कितनी मजबूर! कितनी असहाय! कितनी कमजोर है। यह सब प्रकृति के विरुद्ध एक धिनौना कृत्य है। प्रकृति ने एक पुरुष और एक महिला का अनुपात दिया है। परन्तु आज स्थिति बहुत गड़बड़ा रही है। यदि इसी प्रकार कोख में हत्याएँ होती रही, तो बिन ब्याह लड़कों की संख्या में वृद्धि होती ही चली जाएगी। जिससे हालात अधिक गंभीर एवं भयानक होते चले जाएंगे।

### कटु सत्य

भारत में ऐसे 20 जिले हैं जहाँ लिंगानुपात देश में सबसे कम है। दुःख व आश्चर्य की बात तो यह है कि उन बीस जिलों में पंजाब व हरियाणा के 17 जिले हैं। हरियाणा के 02 जिले गुड़गाँव और फरीदाबाद उस सूची में आने से इसलिए बच गए क्योंकि इन दो जिलों में मुस्लिम आबादी है। हरियाणा प्रदेश के लिए यह एक चुनौती भरी विकट समस्या है। भारत के राज्यों में हरियाणा का नाम सर्वप्रथम आता है, जब कन्या भ्रूण-हत्या, शिशु हत्या, बाल-विवाह जैसे आंकड़ों पर नजर डाली जाती है। 2001 की जनगणना के आंकड़े बताते हैं कि 1000 पुरुषों पर 861 महिलाएँ हैं। 2011 की जनगणना के आंकड़ों के अनुसार 1000 पुरुषों पर 877 महिलाएँ हैं। आँकड़ों में सुधार अवश्य हुआ है लेकिन यह काफी नहीं है। भारत के 29 राज्यों में से हरियाणा राज्य लिंग अनुपात में सबसे निम्न स्तर पर है। जहाँ केरल प्रदेश में 1000 पुरुषों पर महिलाओं की संख्या 1084 है, वहीं हरियाणा में यह संख्या मात्र 877 है। लड़कियों की घटती संख्या एक गंभीर समस्या है।

### भ्रूण-हत्या निरोधक वर्ष

उच्चतम न्यायालय ने कन्या भ्रूण-हत्या को जघन्य अपराध माना है। सरकार ने भी वर्ष 2007 को कन्या भ्रूण-हत्या निरोधक वर्ष घोषित किया था। उच्चतम न्यायालय एवं सरकार का यह एक सराहनीय कदम रहा है। जिस भारतीय समाज में कन्या को देवी का स्वरूप समझा जाता है उसी समाज में न जाने कितने ही परिवारों द्वारा उन्हें इस दुनिया में आने का मौका ही नहीं दिया जाता है। कन्या भ्रूण-हत्या का प्रभाव सामाजिक, पारिवारिक, राजनैतिक, आर्थिक सभी पक्षों में दिखाई देता है। कन्या भ्रूण-हत्या यह दर्शाती है कि पुत्र मोह के

कारण न जाने कितनी मासूम बच्चियों को इस दुनिया को देखने का अधिकार ही नहीं दिया जाता है। कन्या भ्रूण-हत्या का प्रभाव यह है कि आज भारत महिलाओं हेतु असुरक्षित स्थान में चौथे स्थान पर है। कन्या भ्रूण-हत्या का प्रभाव लोगों की मानसिकता पर भी होता है। यह संकुचित मानसिकता का परिचायक है, जो दर्शाता है कि महिलाओं को समाज में आज भी वह अधिकार प्राप्त नहीं है, जो पुरुषों को प्राप्त है। समाज के सामाजिक, पारिवारिक, राजनैतिक, आर्थिक कारक दर्शाते हैं कि समाजिक व्यवस्था लोगों की किसी भी सोच या मानसिकता हेतु जिम्मेदार होती है। फिर कन्या भ्रूण-हत्या के प्रति सोच भी इन कारणों से न सिर्फ प्रभावित होती है, अपितु उसे प्रभावित भी करती है।

#### शोध का औचित्य

कन्या भ्रूण-हत्या भारतीय समाज पर एक कलंक है। स्त्री-पुरुष का निरन्तर घटता अनुपात आने वाले भयानक संकट की ओर इंगित कर रहा है। प्रत्येक व्यक्ति जो संवेदनशील है, वह कन्या भ्रूण-हत्या जैसे जघन्य अपराध से विचलित हुए बिना नहीं रह सकता है। यदि पुरुष के बिना मानव जाति का संवर्धन संभव नहीं है, तो स्त्री के बिना भी मानव जाति का अस्तित्व नहीं बच सकता। स्त्री तो जननी है, स्त्री का मातृत्व ही तो, वह शक्ति है, जो मानव जाति को पीढ़ी दर पीढ़ी बढ़ाती जा रही है। यदि स्त्री को मां के गर्भ में ही भ्रूण के रूप में ही मारा जाता रहेगा, तो स्त्री कैसे बचेगी ?

कन्या भ्रूण-हत्या समाज में कुशीति की भांति व्याप्त है। कन्या भ्रूण-हत्या जैसे बड़े संगीन अपराध सिर्फ कानून से नहीं रोके जा सकते। इसके लिए पूरे समाज विशेषकर युवाओं को मानसिक रूप से सचेत होने की आवश्यकता है।

लड़कों तथा लड़कियों में कोई अन्तर नहीं है। इसलिए लड़कियों को परिवार में बराबरी का दर्जा मिलना चाहिए। लड़कियाँ भी समाज का महत्वपूर्ण हिस्सा है। समाज में सभी को जीने का अधिकार है, तो लड़कियों के साथ ही भेदभाव क्यों?

इसलिए यदि हमें समाज का संतुलन बनाए रखना है तो लड़के व लड़कियों दोनों को एक समान अधिकार व महत्व देना होगा। इस शोध में कन्या भ्रूण-हत्या के प्रति युवाओं के दृष्टिकोण का अध्ययन किया गया है। ताकि युवा वर्ग महिलाओं के प्रति हो रहे इस अन्याय का पुरजोर विरोध करें। इस जागरूकता से कहीं न कहीं स्त्री-पुरुष अनुपात सामान्य हो सकेगा एवं समाज को नैतिक पतन से बचाया जा सकता है।

#### शोध के उद्देश्य

1. युवाओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण का अध्ययन करना।
2. कला संकाय व विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण का तुलनात्मक अध्ययन करना।

#### शोध की परिकल्पनाएँ

प्रस्तुत अध्ययन की निम्नलिखित परिकल्पनाएँ हैं:-

1. छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।
2. कला संकाय व विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।
3. कला संकाय व विज्ञान संकाय के छात्रों का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।
4. कला संकाय व विज्ञान संकाय की छात्राओं का कन्या भ्रूण हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।
5. कला संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।
6. विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।

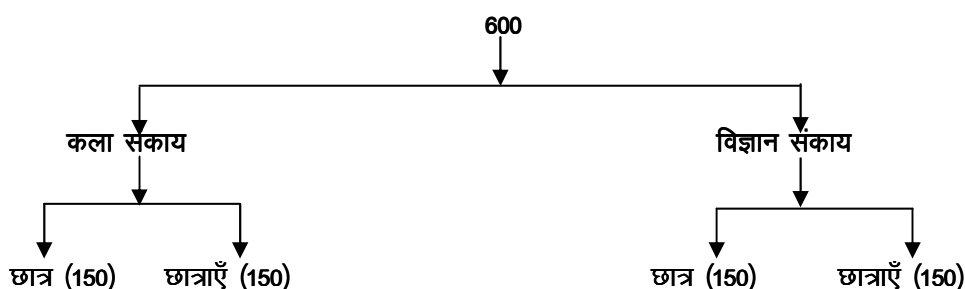
**शोध विधि**

वर्तमान अध्ययन की प्रकृति को देखते हुए इसमें वर्णनात्मक अनुसंधान का प्रयोग किया गया है।

**जनसंख्या एवं न्यादर्श:-**

उक्त शोध के लिए जनसंख्या हरियाणा राज्य के रेवाड़ी जिले के स्नातक स्तर के कला संकाय व विज्ञान संकाय के 600 विद्यार्थियों का चयन यादृच्छिक विधि द्वारा किया गया है।

**रेवाड़ी (जिला)**  
**(महाविद्यालय विद्यार्थी)**

**शोध में प्रयुक्त उपकरण**

प्रस्तुत शोध अध्ययन में कन्या भ्रूण-हत्या के प्रति युवाओं के दृष्टिकोण को मापने के लिए स्वनिर्मित प्रश्नावली का प्रयोग किया गया है।

**आंकड़ों का विश्लेषण**

आंकड़ों के विश्लेषण के लिए निम्नलिखित सांख्यिकी प्रविद्धियों का प्रयोग किया गया है।

1. मध्यमान
2. मानक विचलन
3. 'टी' मूल्य

**परिणाम एवं व्याख्या**

**H<sub>1</sub>** छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।

**कन्या भ्रूण-हत्या के प्रति दृष्टिकोण से संबंधित आंकड़ों का लिंगानुसार वितरण**

| क्र.सं. | तुलनात्मक समूह | N   | मध्यमान | मानक विचलन | टी-मूल्य | परिणाम   |
|---------|----------------|-----|---------|------------|----------|----------|
| 1       | छात्र          | 300 | 30.49   | 5.26       | 8.98     | अस्वीकृत |
| 2       | छात्राएँ       | 300 | 35.19   | 7.41       |          |          |

उपयुक्त तालिका से स्पष्ट है कि छात्रों के प्राप्तांकों का मध्यमान 30.49 है व मानक विचलन 5.26 है। छात्राओं के प्राप्तांकों का मध्यमान 35.19 है व मानक विचलन 7.41 है। प्राप्त 'टी' का मान 8.98 है जो कि तालिका के अनुसार 0.05 स्तर पर वांछित मान 1.96 है तथा 0.01 स्तर पर वांछित मान 2.58 से अधिक है। अतः शोधार्थी की परिकल्पना अस्वीकृत होती है। अतः निष्कर्ष निकलता है कि छात्र-छात्राओं का कन्या भ्रूण हत्या के प्रति दृष्टिकोण में अंतर है।

**H<sub>2</sub>** कला संकाय व विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अन्तर नहीं है।

**कला संकाय व विज्ञान संकाय के युवाओं के आँकड़ों की तालिका**

| क्र. सं. | तुलनात्मक समूह                  | N   | मध्यमान | मानक विचलन | टी-मूल्य | परिणाम  |
|----------|---------------------------------|-----|---------|------------|----------|---------|
| 1        | कला संकाय के छात्र-छात्राएँ     | 300 | 32.9    | 7.23       | 0.20     | स्वीकृत |
| 2        | विज्ञान संकाय के छात्र-छात्राएँ | 300 | 32.78   | 6.43       |          |         |

उपयुक्त तालिका से स्पष्ट है कि कला संकाय के छात्र-छात्राओं के प्राप्तकों का मध्यमान 32.9 है व मानक विचलन 7.23 है तथा विज्ञान संकाय के छात्र-छात्राओं के प्राप्तकों का मध्यमान 32.78 है व मानक विचलन 6.43 है। प्राप्त 'टी' का मान 0.20 है जो कि 0.05 स्तर व 0.01 के स्तर के मान से कम होने के कारण शून्य परिकल्पना स्वीकृत होती है।

अतः कला संकाय व विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।

**H<sub>3</sub>** कला संकाय व विज्ञान संकाय के छात्रों का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।

#### कला संकाय व विज्ञान संकाय के छात्रों का वितरण

| क्र. सं. | तुलनात्मक समूह         | N   | मध्यमान | मानक विचलन | टी-मूल्य | परिणाम  |
|----------|------------------------|-----|---------|------------|----------|---------|
| 1        | कला संकाय के छात्र     | 150 | 30      | 4.74       | 1.62     | स्वीकृत |
| 2        | विज्ञान संकाय के छात्र | 150 | 30.98   | 5.70       |          |         |

0.05 व 0.01 के स्तर पर शून्य परिकल्पना स्वीकृत हुई। अतः कला संकाय व विज्ञान संकाय के छात्रों में कन्याभ्रूण- हत्या के प्रति दृष्टिकोण में सार्थक अंतर नहीं है।

**H<sub>4</sub>** कला संकाय व विज्ञान संकाय की छात्राओं का कन्या भ्रूण- हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।

#### कला संकाय व विज्ञान संकाय की छात्राओं का वितरण

| क्र. सं. | तुलनात्मक समूह            | N   | मध्यमान | मानक विचलन | मानक विचलन | टी-मूल्य | परिणाम  |
|----------|---------------------------|-----|---------|------------|------------|----------|---------|
| 1        | कला संकाय की छात्राएँ     | 150 | 35.8    | 8.09       | 8.09       | 1.42     | स्वीकृत |
| 2        | विज्ञान संकाय की छात्राएँ | 150 | 34.5    | 6.64       |            |          |         |

0.05 व 0.01 सार्थकता स्तर पर) परिणाम परिकल्पना स्वीकृत हुई।

अतः कला संकाय व विज्ञान संकाय की छात्राओं में कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।

**H<sub>5</sub>** कला संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।।

#### कला संकाय के छात्र-छात्राएँ

| क्र. सं. | तुलनात्मक समूह        | N   | मध्यमान | मानक विचलन | टी-मूल्य | परिणाम   |
|----------|-----------------------|-----|---------|------------|----------|----------|
| 1        | कला संकाय के छात्र    | 150 | 30      | 4.74       | 7.58     | अस्वीकृत |
| 2        | कला संकाय की छात्राएँ | 150 | 35.8    | 8.09       |          |          |

तालिका के अनुसार 0.05 स्तर पर वांछित मान 1.96 व 0.01 स्तर पर वांछित मान 2.58 है। जो प्राप्त 'टी' का मान 7.58 से कम है। अतः हमारी शून्य परिकल्पना अस्वीकृत होती है। कला संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में अंतर है।

**H<sub>6</sub>** विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण-हत्या के प्रति दृष्टिकोण में कोई सार्थक अंतर नहीं है।

#### विज्ञान संकाय के छात्र-छात्राएँ

| क्र. सं. | तुलनात्मक समूह            | N   | मध्यमान | मानक विचलन | टी-मूल्य | परिणाम   |
|----------|---------------------------|-----|---------|------------|----------|----------|
| 1        | विज्ञान संकाय के छात्र    | 150 | 30.98   | 5.70       | 5.47     | अस्वीकृत |
| 2        | विज्ञान संकाय की छात्राएँ | 150 | 34.59   | 6.64       |          |          |

उपयुक्त तालिका से स्पष्ट है कि विज्ञान संकाय के छात्रों के प्राप्तकों का मध्यमान 30.98 है। वह मानक विचलन 5.70 है तथा विज्ञान संकाय की छात्राओं के प्राप्तकों का मध्यमान 34.59 है, मानक विचलन 6.64 है। प्राप्त 'टी' का मान 5.47 है जो कि 0.05 स्तर पर वांछित मान—1.96 है तथा 0.01 स्तर पर वांछित मान—2.58 से अधिक है। अतः शोधार्थी की शून्य परिकल्पना अस्वीकृत होती है। अतः विज्ञान संकाय के छात्र-छात्राओं का कन्या भ्रूण—हत्या के प्रति दृष्टिकोण में अंतर है।

### निष्कर्ष

लिंग के आधार पर युवाओं के दृष्टिकोण में अन्तर पाया गया है। लड़कों की अपेक्षा लड़कियाँ का कन्या भ्रूण-हत्या के प्रति अधिक झुकाव पाया गया है।

कला संकाय व विज्ञान संकाय के छात्रों के दृष्टिकोण में कोई सार्थक अन्तर नहीं पाया गया है। अतः संकाय कन्या भ्रूण-हत्या के प्रति दृष्टिकोण पर कोई प्रभाव नहीं डालते हैं।

### सुझाव

1. कन्या भ्रूण-हत्या के पीछे दहेज प्रथा एक अहम् भूमिका निभाती है। बेटियाँ बुढ़ापे में अपने माता-पिता को सामाजिक सुरक्षा प्रदान करने में असमर्थ हैं। इसलिए माता-पिता को लड़कियों पर किया जाने वाला खर्च अनावश्यक लगता है। इसलिए कन्या भ्रूण-हत्या और दहेज प्रथा के खिलाफ कानून सख्ती से लागू होना चाहिए तथा इसके लिए दोषी लोगों को सजा मिलनी चाहिए।
2. आर्थिक कारणों से भी लड़कियों की अपेक्षा माता-पिता लड़कों को अधिक पंसद करते हैं। इसलिए 65 वर्ष से ऊपर के वृद्ध जिनके केवल बेटियाँ हैं, उन्हें सामाजिक सुरक्षा प्रदान करके वृद्धावस्था पेंशन प्रदान की जानी चाहिए। ताकि उन्हें बुढ़ापे में सामाजिक सुरक्षा का भय न रहे और वे लड़के व लड़कियों को एक समान समझे।
3. धार्मिक शिक्षा कन्या भ्रूण हत्या व दहेज प्रथा उन्मूलन में एक महत्वपूर्ण भूमिका निभा सकती है।
4. युवाओं को दहेज-प्रथा, बाल-विवाह, कन्या भ्रूण-हत्या जैसी सामाजिक बुराईयों के प्रति जागरूक करना तथा उन्हें समाज से मिटाने के लिए युवाओं को प्रोत्साहित करना।
5. राष्ट्रीय एवं अन्तर्राष्ट्रीय स्तर पर भी व्यापक रूप से कार्यक्रम चलाये जा सकते हैं। जिसमें युवा पीढ़ी को कन्या भ्रूण हत्या की वर्तमान स्थिति से अवगत कराते हुए, उससे होने वाली हानियों से उन्हें परिचित कराना चाहिए। यह भ्रूण हत्या की रोकथाम हेतु सार्थक प्रयास है।
6. महिलाओं की सुरक्षा निश्चित करने हेतु एवं उनके अधिकारों का हनन न हो, इसके लिए भ्रूण परीक्षण पर प्रतिबन्ध लगाना चाहिए।
7. महाविद्यालय स्तर पर महिला सशक्तिकरण एवं भ्रूण हत्या की रोकथाम हेतु अनेक कार्यक्रम चलाकर कन्या भ्रूण हत्या की दर को कम किया जा सकता है। इसके लिए मीडिया की सहायता भी ली जा सकती है।
8. पुत्री के जन्म पर आर्थिक रूप से कमजोर माता-पिता को आर्थिक सहायता पहुँचाकर भी कन्या भ्रूण हत्या की रोकथाम हेतु कदम बढ़ाए जा सकते हैं।
9. पी.एन.डी.टी. अधिनियम का पालन सख्ती से करना चाहिए तथा अपराधी को तदनुसार दंडित किया जाना चाहिए।
10. लड़कियों को मुफ्त व अनिवार्य शिक्षा के माध्यम से उन्हें आत्म-निर्भर बनाकर माता-पिता का आर्थिक बोझ कम कर सकते हैं, जिससे उन्हें समाज में बराबरी का अधिकार प्राप्त होगा और लैंगिक अनुपात में सुधार अवश्य होगा।

### शैक्षिक महत्व

कन्या भ्रूण-हत्या की रोकथाम से लिंगानुपात सामान्य हो जाएगा एवं महिलाओं की संख्या सामान्य हो सकेगी, जो अभी काफी कम है। इस प्रकार समाज को नैतिक पतन से बचाया जा सकेगा।

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## ROLE OF THE ENGLISH LANGUAGE IN UNDERSTANDING IMPORTANT COMPUTER CONCEPTS

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### Abstract

The English language has become the global medium of communication in science and technology, with an especially dominant role in computer science and information technology. This paper explores the significance of English in understanding and communicating key computer concepts, emphasizing how linguistic proficiency in English facilitates learning, innovation, and global collaboration in the digital era. The study also highlights the role of English in disseminating technical information. Most of the software documentation, programming tutorials, research papers, and online learning platforms use English as their primary language. Platforms such as GitHub, Stack Overflow, Coursera, and edX rely on English to facilitate global collaboration and knowledge sharing. Consequently, proficiency in English provides learners and professionals with greater access to high-quality educational resources, enabling them to engage more effectively with complex computer concepts and participate in international technological development.

**Keywords:** *English Language, Computer Science, Programming Languages, Technical Communication, Digital Literacy, Information Technology, Computer Education.*

### Introduction

Language is not only a means of communication but also a powerful medium for conceptualization, reasoning, and innovation. In the digital era, where computing has become the backbone of nearly every discipline, language plays a crucial role in mediating understanding, dissemination, and the evolution of computer concepts. Among the world's languages, English has emerged as the lingua franca of computing, dominating the design of programming languages, documentation, software development environments, and academic discourse. This dominance is not

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merely historical or cultural; it is embedded within the logical and syntactic structures of technology itself. Consequently, understanding the role of the English language in computer science is essential to comprehending how linguistic structures influence the cognition, learning, and global accessibility of computer concepts.

- **The Interdisciplinary Nexus Between Language and Computing**

The relationship between English and computing extends far beyond vocabulary or instruction manuals. It represents a deeper linguistic-epistemological connection, one in which the syntax and semantics of the English language shape the very frameworks through which computational logic is expressed and understood. **Dasgupta & Hill (2017) mentioned that** localizing programming languages improves novice success, implying English-first syntax can be a barrier and language competence is a real cognitive factor in learning to code. Computing relies heavily on symbolic abstraction, a process that demands linguistic precision. The English language, characterized by its flexible syntax, rich lexicon, and analytical grammar, lends itself effectively to the creation of structured, rule-based systems like programming languages. The conceptual bridge between human and machine language is therefore primarily articulated through English, facilitating the learning, teaching, and communication of technological concepts worldwide.

- **Historical Evolution of English in Computing**

The historical dominance of English in computing is rooted in the post-World War II technological revolution, which was largely driven by research institutions in English-speaking countries. The creation of early programming languages such as FORTRAN (1957), COBOL (1959), and BASIC (1964) relied on English keywords—terms like IF, THEN, GO TO, and PRINT that mirrored natural English instructions (Ceruzzi, 2012). This design choice was not arbitrary; it was intended to make programming more intuitive for scientists and engineers who were already accustomed to English-based scientific discourse.

As computing evolved into a global discipline, English retained its position as the default linguistic framework. The emergence of the Internet in the 1990s further consolidated English as the universal digital medium. Even today, approximately 60% of online content and over 90% of programming documentation are written in English (W3Techs, 2017). The implications of this linguistic centralization are profound: English proficiency directly influences one's ability to engage with core computer concepts, from algorithmic logic to system design.

- **The Linguistic Foundation of Programming Languages**

Programming languages are inherently linguistic systems, they use syntax, semantics, and grammar to structure meaning. English serves as the metalinguistic foundation of most high-level programming languages. Consider the following commands commonly found across languages:



**Table 1: Common English-Derived Terms in Programming Languages**

| English Term | Programming Keyword | Function/Meaning               | Linguistic Origin                       |
|--------------|---------------------|--------------------------------|-----------------------------------------|
| If / Else    | if, else            | Conditional branching          | English logical connectors              |
| Print        | print()             | Display output                 | English verb “print”                    |
| Return       | return              | Output a value from a function | English verb “return”                   |
| Function     | function, def       | Define a procedure             | Latin root function, adopted in English |
| For / While  | for, while          | Looping constructs             | English prepositions and adverbs        |

The consistent presence of English lexical items in programming syntax illustrates how linguistic familiarity enhances cognitive processing. For English speakers, such terms resonate semantically, facilitating faster comprehension of algorithmic logic. For non-native speakers, however, this introduces an additional cognitive layer: learning the programming concept and decoding its linguistic form (Kelleher & Pausch, 2018).

- **English versus Non-English Programming Initiatives**

Although English remains dominant, several initiatives have attempted to localize programming for non-English-speaking populations. Languages such as Arabic-based “Qalb”, Hindi-based “Bharat Script”, and Chinese “(E Language)” have been developed to lower linguistic barriers. However, adoption rates remain minimal, primarily due to interoperability challenges and the entrenched global English-centric ecosystem.

**Table 2: Comparison of English-based and non-English-based Programming Languages**

| Language      | Origin     | Keyword Base | Adoption Level | Remarks                            |
|---------------|------------|--------------|----------------|------------------------------------|
| Python        | USA        | English      | Very High      | Universally taught, English syntax |
| Ruby          | Japan      | English      | High           | English-based structure            |
| E Language    | China      | Chinese      | Low            | Limited international adoption     |
| Qalb          | Arab world | Arabic       | Low            | Conceptual success, limited use    |
| Bharat Script | India      | Hindi        | Experimental   | Still under development            |

This comparison underscores the hegemonic role of English in defining programming literacy. Non-English alternatives, despite their cultural and linguistic relevance, face practical limitations in integration, community support, and technical documentation. The network effect of English where global communication and

collaboration depend on a shared linguistic medium renders local-language computing efforts valuable but niche.

- **English as a Medium of Instruction in Computer Education**

The pedagogical implications of English dominance in computing are substantial. In higher education, most computer science curricula, textbooks, and research journals are produced in English (Graddol, 2006). Even in non-English-speaking countries, students are often required to learn computer concepts through English-language materials. This has led to a phenomenon known as linguistic dependency, where the comprehension of technological knowledge is contingent on English proficiency.

**Barlow-Jones & van der Westhuizen (2016)** finds a significant correlation between students' English proficiency and their grasp of introductory programming modules. English acts as a gatekeeper to digital literacy, those proficient in it gain faster access to emerging technologies, while others remain marginalized.

However, the educational advantages of English cannot be ignored. The widespread availability of English-language MOOCs (Massive Open Online Courses) such as Coursera, edX, and Udemy allows learners from developing nations to access quality computer education at scale. This democratization of knowledge reinforces English's role as both a facilitator and a filter in the global digital landscape.

- **Linguistic Cognition and Conceptualization of Computing**

Cognitive linguistics suggests that language shapes thought, a concept famously articulated in the Sapir-Whorf hypothesis (Whorf, 1956). Applied to computing, this theory implies that the English language influences how programmers conceptualize and organize computational logic. The English tendency toward analytical structure and sequential logic parallels the procedural nature of programming, making it naturally suited for expressing algorithmic processes.

Moreover, the semantic transparency of English words used in programming (e.g., "print," "return," "break") fosters intuitive comprehension. Conversely, non-English speakers may experience semantic opacity, requiring additional mental translation that can impede fluency in coding. This linguistic asymmetry extends beyond vocabulary as it affects conceptual mapping, debugging approaches, and even collaborative communication in multinational software teams.

### **Historical Background**

The connection between English and computer science dates to the mid-20th century, when pioneering research in computing originated primarily in English-speaking countries such as the United States and the United Kingdom. Early programming languages like FORTRAN, COBOL, and BASIC were designed using English keywords (e.g., "IF," "THEN," "PRINT"). This trend established English as the linguistic foundation of computational logic. As the Internet expanded in the 1990s, English became the dominant language of the World Wide Web, further

reinforcing its role as the lingua franca of digital communication and computer education.

### **English as the Language of Programming and Technology**

The symbiotic relationship between the English language and computer technology has been a subject of scholarly attention since the mid-20th century. As computer science evolved, English emerged not merely as a medium of communication but as the linguistic foundation for programming, documentation, and technological innovation. The dominance of English in programming languages, software development, and online collaboration underscores its central role in shaping global digital literacy (Crystal, 2003; Graddol, 2006). This literature review explores how English became the de facto language of technology, its cognitive and pedagogical implications, and the challenges associated with its global dominance.

- **Historical Emergence of English in Computing**

The origins of English as the language of computing can be traced back to the early decades of computer development in English-speaking nations. The pioneering work of scientists such as Alan Turing, John von Neumann, and Grace Hopper was conducted in English, establishing linguistic precedents that became embedded in early programming languages (Ceruzzi, 2000).

Languages such as FORTRAN (Formula Translation), COBOL (Common Business-Oriented Language), and BASIC (Beginner's All-purpose Symbolic Instruction Code) incorporated English keywords and grammatical logic. This was not merely a linguistic choice, but a pedagogical strategy designed to make programming accessible to English-speaking engineers and students (Mahoney, 2005). The result was the institutionalization of English vocabulary, terms like *if*, *then*, *print*, and *go to* as computational commands.

As programming expanded globally, English-based syntactic conventions became the universal standard. Wing (2006) emphasizes that the conceptual clarity of English conditional structures ("if-then-else") aligns naturally with the logical structure of algorithms, thereby reinforcing English's role in computational reasoning.

- **English in Modern Programming Languages**

Modern programming languages, though developed in diverse cultural contexts, continue to employ English lexicon and grammatical structure. Python, Java, C++, and JavaScript—all among the most widely used languages use English verbs and nouns to denote commands and functions.

For example, commands such as *return*, *input*, *import*, and *function* are semantically rooted in English, making them intuitive to English-proficient users. According to Crystal (2003), this linguistic consistency has resulted in a global "digital English," a specialized register of the language characterized by technical precision and universal intelligibility.

Furthermore, software documentation, developer guides, and user interfaces overwhelmingly use English as the default. Studies by the OECD (2016) and World Economic Forum (2017) reveal that over 90% of software documentation and 80% of programming tutorials online are written in English. This concentration of English-language resources consolidates its position as both the medium and message of technological communication.

- **English as a Cognitive Framework in Programming**

Beyond its communicative function, English operates as a cognitive framework that shapes how programmers conceptualize and process information. Chomsky's (2002) theory of linguistic structures suggests that language influences patterns of thought and abstraction. Applying this theory to computer science, Pinker (1994) argues that the analytical and hierarchical syntax of English mirrors computational reasoning, thus facilitating the development of algorithmic thinking.

For instance, programming statements such as if condition then action else alternative reflect the logical sequencing and conditional reasoning found in natural English. This linguistic parallel reduces the cognitive load for English speakers while posing additional challenges for non-native learners (Wing, 2006).

It is further demonstrated that English proficiency correlates positively with programming performance, as students with advanced English comprehension can more easily interpret programming documentation, debug errors, and engage with global developer communities.

- **English in Global Software Development and Collaboration**

The globalization of software development has magnified English's dominance in the digital ecosystem. Platforms such as GitHub, Stack Overflow, and ResearchGate facilitate collaborative problem-solving, code sharing, and peer review, all primarily in English (Warschauer, 2000). As of 2017, more than 80% of GitHub repositories and 95% of code-related discussions use English terminology (World Economic Forum, 2017).

This linguistic homogeneity enhances interoperability but also perpetuates linguistic gatekeeping, where non-native speakers face barriers to participation in global software projects (Kachru, 1992). Warschauer (2000) cautions that the dominance of English in digital communication can marginalize otherwise competent programmers who lack fluency in the language.

### **English and Computer Education**

The interdependence between English language proficiency and computer science education has become increasingly evident in both developed and developing nations. The globalization of information and communication technology (ICT) has made English not merely an academic subject but an instrumental tool for accessing, understanding, and producing computer knowledge (Graddol, 2006). As computing is rooted in English-based terminologies, most digital learning resources as textbooks,

programming documentation, research articles, and MOOCs (Massive Open Online Courses) are delivered predominantly in English.

This linguistic dominance has created a dual reality: English functions as both an enabler and a barrier. It enables learners to access the global digital curriculum, yet it also marginalizes those with limited English proficiency. Consequently, language proficiency directly influences learning efficiency, comprehension of abstract computer concepts, and participation in global digital communities.

- **English as the Medium of Computer Instruction**

In most higher education institutions, especially in countries where English is the second language, English serves as the medium of instruction (EMI) for computer science programs. The rationale behind this is twofold:

- Most textbooks, documentation, and research outputs are published in English.
- English provides a standardized linguistic platform for global collaboration and innovation (Crystal, 2003).

Students who are fluent in English can interpret programming documentation, understand compiler messages, and follow research discussions more effectively than those with limited proficiency. This linguistic competence allows for smoother cognitive processing of programming concepts such as algorithm design, data abstraction, and logical reasoning.

- **Educational Resources and Linguistic Accessibility**

Most computer education materials are developed in English-speaking contexts. Platforms such as Coursera, edX, and Khan Academy offer more than 75% of computer-related courses in English, with limited localization into other languages (OECD, 2016). English is also the default language for programming environments (e.g., Python IDLE, Visual Studio, and GitHub repositories).

The following table provides a comparative analysis of the linguistic distribution of educational resources in computer science.

**Table 3: Distribution of English and Non-English Learning Resources in Computer Science Education**

| Category               | % English-Based | % Non-English-Based | Examples (English)          | Examples (Non-English)                |
|------------------------|-----------------|---------------------|-----------------------------|---------------------------------------|
| Textbooks and Manuals  | 88%             | 12%                 | O'Reilly, Pearson, Springer | Cengage (localized), NPTEL (India)    |
| Online Courses (MOOCs) | 75%             | 25%                 | Coursera, edX, Udemy        | XuetangX (China), SWAYAM (India)      |
| Academic Journals      | 92%             | 8%                  | IEEE, ACM, SpringerLink     | Scielo (Latin America)                |
| Open-Source Platforms  | 90%             | 10%                 | GitHub, Stack Overflow      | Gitee (China), SourceForge.jp (Japan) |

(Data compiled from OECD, 2016; UNESCO, 2016; World Economic Forum, 2017)

- **Linguistic Influence on Learning Outcomes**

Language proficiency shapes how students conceptualize and internalize computer knowledge. Learners proficient in English demonstrate greater comprehension of abstract and technical concepts such as recursion, algorithmic efficiency, and data modeling (Wing, 2006). They can decode programming syntax more quickly because of semantic familiarity with English-derived keywords (e.g., if, else, return, function).

A study found a positive correlation between English proficiency and programming performance among undergraduate students. Their research indicated that students with higher TOEFL-equivalent scores performed significantly better in programming assignments and debugging tasks.

The following table summarizes selected empirical findings that demonstrate the impact of English proficiency on computing education outcomes.

**Table 4: Impact of English Proficiency on Student Performance in Computer Science Education**

| Study                   | Sample Size                | Context                         | Key Findings                                                                                            |
|-------------------------|----------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------|
| Li & Kirkpatrick (2017) | 480 undergraduates         | Hong Kong universities          | Higher English reading proficiency improved programming comprehension and debugging accuracy.           |
| Warschauer (2000)       | 200 international students | U.S. computing programs         | English fluency correlated with better participation in online coding forums and project collaboration. |
| OECD (2016)             | 35 countries               | Global digital education survey | Nations with higher English proficiency scored better in digital literacy and problem-solving tests.    |
| Graddol (2006)          | Review study               | Global                          | English language skills are directly tied to employability in technology-related industries.            |

- **English as a Tool for Cognitive and Conceptual Understanding**

Computer science education is inherently abstract; it involves conceptual reasoning, algorithmic design, and symbolic representation. English, with its logical syntax and analytical grammar, complements this type of reasoning. For example, conditional structures in programming (e.g., if then, else) mirror English grammatical constructions, making code semantics intuitively understandable to English-proficient learners (Pinker, 1994).

Moreover, understanding computing terminologies—such as loop, stack, inheritance, and class depends on one’s prior exposure to their metaphorical

meanings in English. This linguistic grounding reduces cognitive load during learning, enabling faster concept acquisition (Chomsky, 2002).

- **Challenges for Non-Native English Speakers**

Despite its global importance, the dominance of English in computing education imposes barriers for non-native speakers. In multilingual regions such as South Asia, the Middle East, and Latin America, students often rely on translated materials or bilingual instruction. However, translations frequently distort the technical precision of computing terms.

For instance, the English word *object* in “object-oriented programming” has no perfect equivalent in many languages, leading to conceptual confusion (Kachru, 1992). Similarly, compiler errors and documentation written in English can slow down debugging processes for non-native learners. These linguistic hurdles reinforce global educational inequities in the digital age.

- **Pedagogical Strategies for Multilingual Inclusion**

To mitigate linguistic barriers, educators and policymakers are exploring strategies such as:

- **Bilingual Instruction Models:** Teaching core programming concepts in the native language while maintaining English as the technical reference (UNESCO, 2017).
- **Localized Digital Platforms:** Platforms like India’s SWAYAM and China’s XuetangX are translating MOOC content into native languages.
- **AI-based Language Support:** Integration of NLP-driven translation tools in programming environments to assist comprehension.

These approaches align with UNESCO’s (2017) call for linguistic inclusivity in STEM education, emphasizing that multilingual education does not contradict globalization but rather strengthens it.

### **Challenges for Non-Native English Speakers**

Although the dominance of English has unified global communication in technology, it also produces linguistic inequities that disadvantage non-native speakers. In computer education and professional programming environments, the need to understand English terminology, documentation, and discourse communities can be overwhelming for learners from non-English-dominant contexts (Warschauer, 2000). The problem is not limited to vocabulary; it extends to semantic ambiguity, technical register, and cultural idioms embedded in English-language computing materials (Kachru, 1992).

These challenges shape the learner’s ability to interpret programming syntax, follow complex documentation, and participate confidently in online collaboration. As global technology continues to expand, addressing the needs of non-native English speakers is vital for equitable access to digital literacy.

- **Linguistic and Pedagogical Barriers**

Non-native English speakers face several interrelated linguistic difficulties in computing education. First, programming and technical documentation rely heavily on English metaphors and polysemous terms, words that have different meanings in everyday English versus computing. For example, thread, object, class, and inheritance acquire specialized meanings in programming, often diverging from their general definitions (Pinker, 1994). Learners unfamiliar with these metaphorical transfers may struggle to form accurate conceptual models.

Second, English's syntactic complexity and irregular spelling present comprehension barriers for speakers of morphologically simpler languages. Third, technical manuals frequently employ passive voice and dense nominalization, which make reading cognitively demanding even for intermediate English learners (Crystal, 2003).

The following table summarizes common challenges experienced by non-native English learners in computing disciplines.

**Table 5: Linguistic Barriers Experienced by Non-Native English Speakers in Computer Education**

| Type of Barrier               | Description                                                                        | Example in Computing Context                     | Impact on Learning                          | Source                  |
|-------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------|-------------------------|
| Vocabulary Ambiguity          | Words carry specialized technical meanings different from general English usage.   | Class, thread, stack                             | Misinterpretation of programming concepts.  | Pinker (1994)           |
| Syntax Comprehension          | Difficulty parsing complex English sentence structures in documentation.           | Multi-clause API descriptions or error messages. | Slower reading and code comprehension.      | Crystal (2003)          |
| Cultural Idioms and Metaphors | Technical instructions include culturally specific phrases.                        | "Kill a process," "fire a method."               | Confusion or misinterpretation of commands. | Kachru (1992)           |
| Pronunciation and Listening   | Oral instruction in EMI (English-medium instruction) classrooms is hard to follow. | University lectures or online tutorials.         | Reduced retention and engagement.           | Li & Kirkpatrick (2017) |
| Limited Academic Vocabulary   | Lack of exposure to academic and technical registers.                              | Reading IEEE/ACM research papers.                | Difficulty synthesizing scholarly material. | OECD (2016)             |



- **Psychological and Cognitive Effects**

Language barriers extend beyond comprehension of difficulties to affective and psychological dimensions. Many non-native learners experience linguistic anxiety, a form of performance stress when communicating in English in academic or professional settings (Graddol, 2006). This anxiety can lead to reduced participation in group projects, hesitation to post questions on forums such as Stack Overflow, and avoidance of public code repositories (Warschauer, 2000).

- **Structural Inequalities in Access to Resources**

A significant structural challenge arises from the English-centric nature of educational resources. Most programming tutorials, MOOCs, and technical libraries are published only in English (OECD, 2016). Localized translations, when available, are often incomplete or outdated. For example, GitHub and Stack Overflow, two of the largest developer communities operate almost entirely in English, meaning that non-English speakers depend on machine translation tools, which may misrepresent technical nuances (UNESCO, 2017).

- **Institutional and Pedagogical Responses**

Recognizing these challenges, universities and governments have begun implementing linguistically responsive strategies. Some institutions integrate English for Specific Purposes (ESP) courses into computer science programs to teach domain-specific vocabulary. Others promote bilingual instruction, allowing students to discuss programming concepts in their native language while referencing English-language syntax and documentation.

The use of AI-based translation tools, such as GitHub Copilot and Google Translate APIs integrated into IDEs (Integrated Development Environments), has also gained traction, enabling real-time translation of comments and documentation.

The following table summarizes selected strategies for mitigating linguistic barriers and promoting inclusion.

**Table 6: Strategies for Supporting Non-Native English Speakers in Computing Education**

| Strategy / Intervention                     | Implementation Example                                                                | Observed / Expected Outcome                                          | Supporting Source       |
|---------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------|
| English for Specific Purposes (ESP) courses | Universities in Hong Kong and Singapore integrate computing-specific English modules. | Improved comprehension of programming documentation and terminology. | Li & Kirkpatrick (2017) |
| Bilingual or Translanguaging Instruction    | SWAYAM (India) and Xuedong (China) deliver MOOCs in English + local languages.        | Greater participation and reduced dropout rates.                     | UNESCO (2017)           |

|                               |                                                                         |                                                         |                             |
|-------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------|
| AI-Assisted Translation Tools | Integration of real-time translation in VS Code and browser extensions. | Enhanced accessibility of technical resources.          | OECD (2016)                 |
| Peer-Support Communities      | Formation of local coding clubs translating tutorials collectively.     | Social support and linguistic scaffolding.              | Warschauer (2000)           |
| Localization of Documentation | Open-source projects translate README files into multiple languages.    | Increased global contributions to open-source software. | World Economic Forum (2017) |

#### • Implications for Global Digital Inclusion

Addressing the challenges of non-native English speakers is critical to achieving global digital equity. The digital divide is not solely technological but also linguistic. Without equitable linguistic access, entire populations risk exclusion from the knowledge economy. As Graddol (2006) argues, future global progress in technology will depend on how effectively the English-speaking world collaborates with linguistically diverse communities.

Governments and institutions should therefore:

- Integrate **language support frameworks** into computer education.
- Encourage **multilingual digital ecosystems** by funding translation and localization projects.
- Promote **teacher training** in bilingual pedagogy for STEM subjects.

Such initiatives align with UNESCO's (2017) vision of inclusive multilingualism, ensuring that technological advancement does not exacerbate linguistic inequality.

#### The Role of English in Emerging Technologies

The rapid growth of emerging technologies, particularly artificial intelligence (AI), machine learning (ML), data science, and blockchain has reinforced English as the lingua franca of technological innovation. The intersection of English language dominance and technological advancement is both structural and historical. English has become not merely a medium of communication but a semantic infrastructure underpinning digital system (Crystal, 2003).

From the algorithms that power natural language processing (NLP) to the documentation used in cloud infrastructure, English occupies a central role in shaping how technologies are developed, taught, and disseminated worldwide (Floridi, 2015). This section explores the multifaceted role of English in emerging technologies, examining its influence on data models, AI training, human-computer interaction, and global collaboration.

- English as the Linguistic Core of AI and Machine Learning

Most AI models including large language models (LLMs) and deep-learning algorithms are primarily trained on English-language datasets (Bender et al., 2015). This bias reflects the overrepresentation of English content on the Internet and within open-source data repositories such as Common Crawl and Wikipedia.

As a result, AI systems often interpret meaning, emotion, and context through English-centric linguistic frameworks, leading to varying performance when processing non-English languages. For instance, NLP tools exhibit higher accuracy in English sentiment analysis than in Arabic, Hindi, or Swahili.

The table below outlines key areas where English plays a dominant role in emerging AI technologies.

Table 7: English Dominance Across Emerging Technology Domains

| Technology Domain                 | Primary Role of English                                           | Examples of Systems/Tools    | Impact on Global Access                                                                | Source               |
|-----------------------------------|-------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------|----------------------|
| Natural Language Processing (NLP) | Core linguistic dataset for model training and evaluation.        | ChatGPT, BERT, GPT-4, Claude | Bias toward English syntax and semantics; reduced accuracy for low-resource languages. | Bender et al. (2015) |
| Machine Learning (ML)             | English-based data labels and annotations dominate open datasets. | ImageNet, Kaggle datasets    | English-based metadata affects cross-lingual understanding.                            | Joshi et al. (2016)  |
| Cloud Computing                   | English as the interface and command-line instruction language.   | AWS, Azure, Google Cloud     | Limits usability for non-English developers.                                           | Floridi (2015)       |
| Cybersecurity                     | English terminology in risk frameworks and protocols.             | NIST, OWASP, ISO standards   | Challenges for localized implementation of security policies.                          | OECD (2016)          |
| Blockchain & Web3                 | English-centered smart contract language syntax.                  | Solidity, Ethereum           | Restricts participation for non-English programmers.                                   | Graddol (2006)       |

- English and Data Bias in Artificial Intelligence

English’s dominance in AI has inadvertently produced linguistic bias in machine learning systems. When training datasets are overwhelmingly in English, AI models internalize English cultural values, idioms, and social hierarchies (Bender et al., 2015). Consequently, systems exhibit disparities in performance and fairness when interacting with other linguistic communities.

For example, voice-recognition systems such as Siri or Alexa perform best with American or British English accents, while showing reduced accuracy for non-native accents (OECD, 2016). Similarly, emotion-recognition algorithms interpret sentiment through English-centric emotional vocabularies, often misclassifying cultural expressions of politeness or disagreement (UNESCO, 2017).

This linguistic imbalance underscores the need for multilingual AI training and inclusive language modeling. English thus functions both as a unifier and as a gatekeeper enabling technological progress while marginalizing linguistic diversity.

- **English in Human-Computer Interaction (HCI)**

In human-computer interaction (HCI), English forms the backbone of interface design, command syntax, and voice-assistant interactions. Graphical user interfaces (GUIs) and command-line interfaces (CLIs) primarily use English text for commands, options, and outputs. Even when localized versions exist, their structure often mirrors English linguistic logic, influencing how users conceptualize digital operations (Norman, 2013).

Furthermore, the metaphors of computing, such as “desktop,” “folder,” “window,” and “cloud,” originate from English cultural and linguistic contexts. These metaphors shape the mental models users form when engaging with technology, embedding English epistemology within computing itself (Crystal, 2003).

The following table compares the prevalence of English-language command structures across different emerging technologies.

**Table 8: Common English Command Structures in Emerging Technologies**

| Domain               | Command/Term (English Origin) | Function/Meaning                  | Equivalent in Localized Systems                  | Challenges for Non-English Users          |
|----------------------|-------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------------|
| Cloud Infrastructure | Deploy, Instance, Bucket      | Setting up and managing resources | Often untranslated in foreign interfaces         | Incomplete conceptual mapping             |
| Data Science         | Train, Test, Validate         | Model building process stages     | Transliterated in other languages                | Cognitive mismatch with native grammar    |
| Cybersecurity        | Encrypt, Patch, Threat        | Security procedures               | Limited equivalents; rely on English borrowings  | Ambiguity and misunderstanding            |
| AI Development       | Prompt, Token, Inference      | NLP and model terminology         | Largely retained in English                      | Difficulty in comprehension and retention |
| Blockchain           | Smart contract, Gas fee, Mint | Transaction and verification      | Partial translation (e.g., contrato inteligente) | Semantic distortion or loss               |

- **English as the Bridge for Global Collaboration**

Despite these challenges, English remains a powerful enabler of global collaboration in emerging technologies. Platforms such as GitHub, Kaggle, and IEEE rely on English as the default communication medium. This uniformity facilitates joint research, code sharing, and academic publication (Li & Kirkpatrick, 2017).

The rise of open-source movements has further solidified English's role as the shared "digital commons." Developers from across the world contribute to the same repositories, using English-based commenting conventions, documentation standards, and version control systems (Warschauer, 2000). As a result, English serves not only as a tool for understanding but also as a social currency within global innovation ecosystems.

- **Future Prospects: Multilingual AI and Inclusive Technology**

Recent developments suggest an increasing awareness of linguistic inclusivity in technology. Multilingual AI systems such as Google's "PaLM 2" and Meta's "No Language Left Behind" (NLLB) project aim to integrate data from over 200 languages to mitigate English bias (UNESCO, 2017). However, challenges persist in achieving semantic equivalence across languages, as technical terms and cultural expressions do not always have direct translations (Florida, 2015).

Future systems must therefore balance English's global practicality with multilingual representation, ensuring that emerging technologies reflect the world's linguistic diversity. This approach aligns with the United Nations' Sustainable Development Goal (SDG 10) on reducing inequality through inclusive innovation (United Nations, 2017).

### **Implications and Recommendations**

The dominance of English in computer science and emerging technologies has far-reaching implications for education, equity, and innovation. While English facilitates global collaboration and access to digital knowledge, it simultaneously creates linguistic barriers for non-native speakers. Educational institutions relying on English-medium instruction often disadvantage students lacking advanced proficiency, leading to unequal learning outcomes (Li & Kirkpatrick, 2017). Similarly, AI and data-driven systems trained primarily on English datasets embed linguistic bias, resulting in inequitable access and representation (Bender et al., 2015).

To address these challenges, several strategies are recommended. Institutions should integrate English for Specific Purposes (ESP) courses in computing curricula and adopt bilingual or translanguaging approaches to improve comprehension (Garcia & Wei, 2014). Governments must align ICT policies with multilingual education, while technology developers should create multilingual AI models to promote fairness and inclusion (UNESCO, 2017). Collaboration between academia, industry, and policymakers is essential to ensure linguistic equity in global technological ecosystems.

By embracing inclusive language frameworks, the role of English can evolve from a barrier into a bridge, facilitating equitable participation, cross-cultural innovation, and sustainable digital development worldwide.

### Conclusion

The English language remains the cornerstone of global communication in computer science and emerging technologies. Its dominance has unified diverse linguistic communities, enabling collaboration, innovation, and rapid technological progress. From programming syntax to artificial intelligence and digital education, English functions as both the structural and semantic foundation of modern computing (Crystal, 2003). However, this linguistic centrality also reinforces disparities between native and non-native English speakers, creating cognitive, educational, and socioeconomic barriers (Warschauer, 2000).

To achieve true global inclusivity, technological advancement must be accompanied by linguistic equity. Educational institutions should integrate targeted English training with bilingual instruction, while developers and policymakers must prioritize multilingual design and localization in digital systems (UNESCO, 2017). Addressing linguistic imbalance is essential not only for accessibility but also for ensuring ethical AI and equitable participation in the global knowledge economy.

Ultimately, the role of English in technology should evolve from a gatekeeper of knowledge to a gateway of opportunity bridging cultures, empowering diverse learners, and fostering a truly inclusive digital future.

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