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Parul Manchanda, N. Malti

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A Study of Growth and Risk Aspects of Indian Steel Industry

Renu Kumari Verma



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OJAS

Expanding Knowledge Horizon

AN INTERNATIONAL JOURNAL OF RESEARCH IN MANAGEMENT

Volume 2, No.2, July-December 2013

From the Desk of the Chief Editor

I am proud to announce the publication of the Volume 2, No.2 of OJAS, an international multidisciplinary Journal of Research in Management. Since inception, OJAS has responded to the growing research needs in management. We are publishing papers received from eminent scholars and researchers from India and abroad. The papers, which have been put through a double blind review process, cover different areas of management.

The current issue deals with a variety of aspects which are social, economic & politico-economic in nature. The contributors have dealt with the current problems related to organizational politics, tax manipulations, illegal lockouts, employees' conflicting attitude & behavioural disputes. The papers included in the issue deal with research on a variety of topics including design of service system for insurance business; best practices & strategies for Industry-Academia collaboration; importance of business communication in the hotel industry; management of human resource personnel in Indian domestic BPO industry and growth and risk facets of Indian Steel Industry.

The OJAS team is determined to direct its vigor in digging the potential in borders of the different managerial disciplines. This necessitates horizontal thinking and challenging our own esteemed thoughts and views about challenges at hand. The current issues is a very modest endeavor at meeting the vast objective of flouting the fair knowledge systems demonstrated by different Researchers in India and abroad.

All the manuscripts included here are reviewed as well as expert reviewed. The success of any research journal is built primarily on four groups of people : the contributors, the reviewers, the associate editors, and the publication staff. My sincere thanks are due to the members of editorial and advisory boards, manuscript contributors and all others who have put in their might in compiling this issue. I would like to thank all of them and express my sincere appreciation for the support they have given to OJAS under my predecessors. I look forward to continuing this relationship and receiving your suggestions and ideas for making OJAS more valuable for our research community.

Prof. (Dr.) M. Ashraf Rizvi

Editor-in-chief

OJAS: Expanding Knowledge Horizon

Ekvas Telecom Pvt. Ltd. (ETPL)

Ekta Nand Chahal
Poorva Ranjan

Abstract

A strategy adopted by two related companies located in different taxing jurisdictions to exchange products and services between themselves in order to gain the potential tax benefit has given birth to a new term 'Transfer Pricing Manipulation'(TPM). The taxing authorities worldwide have recognized these tax manipulations, which were resulting in the loss of huge tax revenues. As a result complex transfer pricing tax rules are expanding worldwide. As per the Transfer pricing laws, these companies are required to demonstrate to taxing authorities that intercompany prices are established on an arm's-length basis. (That is, companies need to be prepared to demonstrate that the intercompany prices are in line with what would have been charged had the two companies not been related). The present case deals with a Switzerland Telecom Company known as Ekvas Telecom Pvt. Ltd. (ETPL) which opens its subsidiary in India called Ekvas India Ltd. (EIL) to sell its telecom equipment to the customers. Within 2 years of its operation, ETPL lands up in a problem due to TP Audit conducted by the Indian Government. This case study can be used in two ways for class room teaching. First, the management students can learn the Concept, Importance and TP Calculation. Second, this case also illustrates the importance of External Legal Environment Research in a Host Country.

Keywords : Transfer pricing/ TPM/ International transactions/TP audit/ OECD

Introduction

As the globalization of Indian business continues to accelerate, transfer pricing will remain foremost on the agenda of Indian income-tax authorities into the foreseeable future. According To Caribbean Community (Caricom) Secretariat- "A Transfer Price is simply the price that two related persons negotiate between each other for the supply of goods or services"

"Transfer prices are significant for both taxpayers and tax administrations because they determine in large part the income and expenses, and therefore taxable profits, of associated enterprises in different tax jurisdictions."

OECD Transfer Pricing Guidelines

ETPL, September 2011, 07:00 hours, Switzerland

"Sir, we have received a notice from Department of International Taxation in India and it demands that CFO of the company should

meet TPO on 28th September 2011 at their office in India". A phone call from Mr. K Subramanian, regional manager, India made Mr. Robinson, the CFO, Ekvas Telecom Pvt. Ltd to cancel his business expansion trip. He immediately called up Ms. Quek, his personal secretary to cancel all his appointments for the day, and arrange a meeting with their Finance & Taxation team at 1000 hrs with all consolidated financial Statements.

His company had been supplying products to their Indian center from last 3 years from their manufacturing base in Switzerland at a transfer price. Transfer pricing is simply the act of pricing of goods and services or intangibles when the same is given for use or consumption to a related party (e.g. Subsidiary). Since 26 years of his progressive business tenure, he has never faced this type of challenge. For the first time he heard about TP regulations when a notice was served to him. Now ETPL is being accused of indulging in Transfer Pricing Manipulation (TPM) by taxing authorities in India. **Generally, TPM is fixing TP on non-market**

1. www.caricom.com, 2. Transfer Pricing officer, 3. OECD guidelines

basis which generally results in saving the total quantum of organization's tax by shifting accounting profits from high tax to low tax jurisdictions (*Appendix 1*).

In order to minimize lost tax revenues, taxing authorities scrutinize transfer pricing arrangements closely to ensure that MNEs comply with the relevant laws of their respective jurisdictions. Thus, complex TP tax rules are expanding worldwide. TP laws generally require companies to demonstrate to taxing authorities that intercompany prices are established on an arm's-length basis. That is, companies need to be prepared to demonstrate that the intercompany prices are in line with what would have been charged had the two companies not been related.

The worldwide growth in TP regulations is a recent development. In 1994, only the United States and Australia audited transfer pricing aggressively. Since then, more than 55 countries have increased their focus on TP and begun to more closely monitor and penalize non-complying transactions. These recent developments made Mr. Robinson reflect back on the starting days of his entrepreneurial venture, his brain child : **EKVAS TELECOM PVT. LTD. (ETPL)**.

December 1999, Switzerland: Initial years of Company

In 1999, Mr. Robinson had started his company with the vision to become the largest telecom solution provider company. At that time, the concept of video conferencing & wireless networking solutions was very bizarre & unacceptable by many. He wanted to manufacture an instrument/device that would open new arenas for communication and would change the way of doing the business altogether.

The company was started in the rented room at Switzerland. After early phase of struggle ETPL started showing good performance in the market. With the moving upward graphs, they started investing in the Asian & European markets. Soon ETPL expanded operations in London, Australia, Boston and Toronto and became the £150 million Multinational Company. Dealing with the cross border clients and operating in their market was an immense challenge for them.

July 2008, India: Launch of ETPL's Indian Subsidiary

In the year 2007, ETPL applied for starting a subsidiary company

in Mumbai, India. Mr. Robinson vividly remembered the day when Mr. K. Subramanian called him in the midnight to inform that their application has been approved by the government of India and they can launch their subsidiary in Mumbai. In October, 2008 ETPL's Indian subsidiary unit, was officially launched, offering advanced communications solutions for mobile and fixed networks as well as consumer products. They named it as "EKVAS India Ltd." (EIL) (*Appendix 2*).

January 2009, India: EIL's Days of Struggle

Since its inception in 2008, EIL is into the manufacturing of telecom equipment. But it was incurring losses due to the high risk situation in the developing market. The telecom revolution through an outside MNC was not welcomed by the market. The political conditions and new telecom regulations were shaping up at that time and EIL was receiving Luke warm response from Indian market. Situation changed for better since 2009 onwards. The EIL started showing some profitable operations now. One of the reasons could have been change in market conditions to make it more favourable for telecom MNC'S & EIL's rigorous market capturing strategies.

September 2011, 10:00 hours, Switzerland: the Meeting

The finance & taxation team has arrived with all the financials & other relevant documents. The discussion started with the TPM Charges imposed by DIT on EIL. The fax machine produced a memo of financials sent from Mr. K. Subramaniam with his research work on TP calculation. Ms. Quek handed over the financials (*Appendix 3*) & the documents to the finance manager to interpret and give their opinion and solutions to the current problem.

Summary of the research work:

The research work emphasized on OECD guidelines, which laid the foundation of Arm Length Principle. **Arm's Length Price** is the price at which independent enterprises deals with each other, where the conditions of their commercial and financial relations ordinarily are determined by the market forces. There are established methods like **CUP method, Cost Plus Method and Resale Method** (*Appendix 4*). These methods depend on the type of information available, Functions performed and Risks assumed. In case functions and risks of a company are not comparable with

some other company, the **Transaction Net Margin Method (TNMM)** may be used for arriving at arm's length prices.

Accordingly, an effort is made to find the comparable companies which are into the same businesses. Their mean of profitability ratios (of comparables) is compared with the profitability ratios of the organization in question to predict the level of transfer pricing manipulation in that company.

According to the OECD guidelines the level or Arm's length price of the related party(company in question) should lie in the range of -5% to +5% of the calculated arms length price of our comparables (competitors).

A detailed study was made into the operations of the subsidiary to find out at least 10 Indian companies that can be taken as comparables. Based on the discussions, he asked his marketing head, Mr. Arvind Ahuja, India to send him the details of the companies operating in the same line & if possible their financial as well. (**Appendix 5**).

The analysis of functions assumes that TNMM method can be used for further computing the Arm's Length Price of EIL, India. For this, ETPL's finance Team can use these financials to judge their current status vis-à-vis to the profitability of the other comparable companies in India.

They would also be working on the arm's length Price by calculating the **operating ratios**, so that a clear picture can be given to Transfer Pricing Officer in India. The calculation of operating ratios of all the companies would be done and compared with the EIL's operating ratio so that analysis can be made accordingly. Based on the result, the fate of EIL, India rests.

Mr. Robinson asked his finance manager to find a way out and ensure that this never happens again in future with EIL, since India is very important market for ETPL. He is been given one week's time for the same.

Conclusion:

There is the need for developing and developed economies to be aware and be alert of the challenges posed by transfer pricing. EIL is now facing strong legal consequences because of being unaware of TPM. A large proportion of world trade is accounted for cross-border trade taking place within multinational enterprises,

wherein branches or subsidiaries of the same multinational enterprise exchange goods or services. Ignoring this area of regulation can make a company land up in serious problem which can hamper its working and can lead to even its closure. The transfer pricing regulations are imposed by the nations for protecting their tax base while not hampering foreign direct investment and cross-border trade but sometimes, problems may arise if company ignores TP laws.

In relation to above discussion:

1. Suppose you are the finance manager of EIL. Briefly explain the procedure of computing Arm's Length Price.
2. What do you understand by the term TPM ? What can be the motivations for TPM introduction by the MNEs ? How does it affect the nations?
3. Based on the details provided, compute Arm's Length Price of the EKVAS India Ltd ? Do you think EIL is indulging into TPM practices?

APPENDIX 1: Transfer Pricing (TP) : TP refers to the pricing of goods & services or intangibles transferred within an organization. TP involves the price at which transactions between units of MNC's take place, including the inter-company transfer of goods, property, services, loans and leases. This transfer can be: a. between two divisions (production division to sales division) and/or b. From a parent company to a foreign subsidiary.

Transfer Pricing Manipulation (TPM) : It is TPM that is discouraged by Governments as against TP which is the act of pricing. TPM is fixing transfer price on non-market basis which generally results in saving the total quantum of organization's tax by shifting accounting profits from high tax to low tax jurisdictions. The implication is moving of one nation's tax revenue to another. A similar phenomenon exists in domestic markets where different states attract investment by under cutting Sales tax rates, leading to outflow from one state to another, something the Government is trying to curb by way of realization of VAT.

APPENDIX 2 : Company Overview

"EKVASH India Ltd." – A Telecom Solutions Provider to its various customers, which undertakes activities ranging from planning, engineering, equipment sales to implementation, commissioning, field support and network management. These dealings broadly fall in the below mentioned business segments of 3G India Ltd.

Systems Segment : 3G India undertakes manufacture of telecommunication carrier equipment for sale to independent customers, marketing of telecom equipment manufactured by Group Companies, implementation, commissioning, and support services.

Software services : 3G India provides contract software development services to its Aes.

Others : Under this segment, non-core activities of 3G India like cost recharges, reimbursement of expenses, etc. are covered.

APPENDIX 3 : The EIL's financials for the year 2009-2011 are:

Revenue Statement	Amount in Rs.
Sales	20,555,000,000
Add : Excise Duty	3,555,500,000
Less : LST / CST	66,567,244
Total Operating Revenue	24,043,932,756

Expenses Statement	Amount in Rs.
Installation/Support Expenses	2,232,150,560
Cost of Goods Sold (Traded)	16,356,655,552
Material Consumed	5,222,222,226
Accretion/(Discretion) in Project work in Progress	-3,000,546,263
Salary & Other Benefits	962,345,903
Administration, Selling & Distribution	2,000,450,350
Total Operating Expenses (TC)	23,773,278,328

APPENDIX 4 : Methods to Calculate Arm's Length Price

Arm's length price is the price at which independent enterprises deals with each other, where the conditions of their commercial and financial relations ordinarily are determined by the market forces

Article 9(1) of the OECD Model Tax Convention on Income and Capital⁴³ provides that where 'conditions are made or imposed between two enterprises in their commercial or financial relations which differ from those that would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to any one of the enterprises, but, by reason of those conditions, have not so accrued, may be included in the profits of that enterprise and taxed accordingly.

A) Comparable uncontrolled price (CUP) : The best method of determining if a price charged for property or services is arm's length is to compare controlled transactions to uncontrolled transactions. If comparable uncontrolled transactions can be identified, a CUP may be extracted from which to test transfer prices used by associated entities in controlled transactions to ensure that the transfer prices comply with the arm's length principle. If there is a significant difference between transfer prices used by associated entities and the potential CUPs that have been identified, the CUPs may need to replace the transfer prices that were used by the associated entities. The CUP method is the most direct way of determining arm's length prices.

The CUP method looks directly at prices themselves. It compares the price charged for property or services transferred in a controlled transaction to the price in a comparable uncontrolled transaction in comparable circumstances. This method is typically used in case of those price transactions where a group is using an entrepreneurial model. The downside of it is that it can be difficult to obtain CUPs for all the telecom transactions carried out.

B) Cost plus method : The cost plus method (CPM) determines an arm's length price by adding an appropriate gross profit margin to an associated entity's costs of producing products or services. The gross profit margin should reflect the functions performed by an entity and should include a return for capital used and risks accepted by the entity. The gross profit margin for a controlled transaction is calculated by reference to the gross profit margins made in comparative uncontrolled transactions. The CPM evaluates the arm's length nature of a controlled transaction with reference to its gross profit mark up.

This method looks at mark-ups over cost charged to related parties in comparison with the unrelated parties. It is typically used to price relatively low risk routine activities. The arms length price of the original controlled transaction is arrived at after adding cost plus mark up to arrived costs.

C) Resale price method : The resale price method (RPM) evaluates the arms length nature of a controlled transaction with reference to the comparable uncontrolled transaction. This method begins with the price at which a product was purchased from an A.E and is resold to an independent enterprise. It is most appropriate in the cases involving the purchase/resale of tangible goods/services in which the buyers/reseller is not making any addition to the goods by physically altering them.

D) Transactional net margin method : The transactional net margin method (TNMM) reviews the arms length character of transfer prices in a controlled transaction by testing the profit results of one participant in the transaction. There are many measurements that may be used in applying the TNMM. The apt ratio depends on the status of the controlled dealings that are being scanned. The aim of the TNMM is to decide an associated entity's net profit from its core business activities. The following ratios may be of use under the TNMM:

a. The ratio of net profit before tax to sales. It offer an indication of an firm's profitability. The net profit is net operating profit with non-operating income and costs excluded.

b. The ratio of net profit before interest and tax to sales (NBIT). This profit measure is called earnings before interest and tax. A feature of NBIT is that the funding of the firm (whether by debt or equity) is excluded from the comparison of operating profit from core business.

c. The Berry ratio of gross profit to operating expenses provides a test of net profitability. A ratio of 1:1 is a break even point under this ratio.

d. The ratio of net profit before tax to shareholders' funds. This ratio provides a measure of the return to shareholders on capital and retained earnings.

e. The ratio of earnings before interest and tax to assets provides a return on assets.

f. The ratio of net profit before tax to the number of employees, or the ratio of sales to the number of employees, may be used to test the relative efficiency of a business.

E) Profit split method : This method evaluates whether the allocation of the combined profit or loss attributable to one or more controlled transactions in arms length. This method is applied where each party to the transaction has significant intangible assets or operations are integrated and cannot be separately evaluated.

APPENDIX 5 : Financials of the comparables for the year 2008-2009:

Company Name	Operating Profit(Rs.)	Sales Revenue(Rs.)
Mumbai Communications	-5081615000	23,450,000,000
Vastu Telecom Pvt. Ltd.	-8390107800	30,333,000,000
Safedi Telecom Products Ltd.	1927875000	19,875,000,000
Loyal Pvt. Ltd	2922276000	34,789,000,000
Yippie Telecom Pvt. Ltd	1893434760	22,540,890,000
ABN Automatics Ltd.	2528982000	62,444,000,000
West Engineering Co. Ltd.	1710285000	30,005,000,000
Baba Brothers Ltd.	6156249000	24,333,000,000
Teleindia Pvt. Ltd.	229735500	19,977,000,000
Rama Telecom Ltd.	326315000	29,665,000,000

Calculation and Analysis :

Firstly, the appropriate method of calculation is chosen on the basis of available information, economic conditions and risks assumed of the related party (the party on which the regulation is imposed) and comparables (the other companies with which the functions are comparable). Secondly, the appropriate profit level indicator (PLI) is chosen. i.e operating profit ratio, net profit ratio etc, etc. Thirdly, the related data is extracted from the audited books of our comparable companies. Fourthly, the arithmetic mean of the PLIs is compared with the operating profit of our related party.

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CRITICAL LITERATURE REVIEW**1.1 LITERATURE REVIEW**

"Few apparently technical matters dealt with by professionals involve such fundamental and far reaching implications as international transfer pricing."

Sol Picciotto

ACCORDING TO ARIEH GAVIOUS

Transfer pricing can be defined as : In large organizations, a single central management cannot monitor and control all the operation parameters of its every subunit. For this very reason, large organizations are separated into divisions. Each division is an autonomous unit and all controlling rights lie in the hands of its manager's i.e. he has the freedom to take all necessary action. But there arise a problem i.e. in a decentralized organization-difficulty in evaluating the performance of the division managers. Also, the central management needs to coordinate the actions of each & every division to maximize the organization's total profit. In order to evaluate the performance of each division, a method is needed for measuring the contribution of each division to the total profit of the organization. A solution to the problem is to set prices for goods which are transferred from one division to another. These prices are known as transfer prices.

Transfer prices are mainly used

1. To evaluate the division managers' performance based on the profits made by him,
2. To help & coordinate the divisions' decisions for achieving the organization's goals - i.e., ensure goal congruence
3. To enable the divisions to take final decisions like the pricing of the final product,
4. To preserve each divisions' autonomy & freedom.

ACCORDING TO CARIBBEAN COMMUNITY (CARICOM) SECRETARIAT

A Transfer Price is simply the price that two related persons negotiate between each other for the supply of goods or services.

A general assumption that is often made because of that relationship is that the Transfer Price that results from the negotiations will be affected by that relationship, in other words, it would be different from the price derived from two unrelated parties trading at arms length.

As global trade continues to grow substantially, so too has the interdependence between multinational enterprises (MNEs) and national economies. The World Trade Organization data of 2003 estimate that 45% of export trading in monetary terms relates to subsidiary trading. MNEs were estimated to be in the vicinity of

65000 entities with over 185000 subsidiaries and at least two thirds of MNEs are usually rooted or controlled by a head or parent company with the decision on how the overseas entities are structured being largely determined by global tax considerations. The usual corporate structure by a resident company based in any part of the world in setting up operations overseas is through an overseas branch or an overseas resident subsidiary.

Regardless of the choice of structure of the MNE what is evident would be the direct relationship or association between Parent and Head Company and the overseas branch or overseas subsidiary. For the MNE, what is critical is not the profitability of any particular component or branch in isolation but the overall group or enterprise profitability. MNEs may therefore be indifferent as to which jurisdiction it pays tax but at the same time mindful of its overall profitability after worldwide taxation.

In the absence of a Transfer Pricing legislative regime, there is the real threat of MNEs using transfer-pricing techniques to artificially achieve minimum taxation within such jurisdiction. There is no global tax system in place and different tax rates and rules between states provide a potential incentive for MNEs to manipulate their Transfer Prices to recognize lower profits in states with higher corporate tax rates and vice versa.

Transfer pricing will probably present the most challenges in the future of Tax Administration since traditional methods of business and consequentially auditing are changing because of these trends.

1.2 CONCEPTUAL SUPPORT

1.2.1 OECD GUIDELINES

OECD formulated "Guidelines on transfer pricing". They serve as generally accepted practices by the tax authorities. There is International consensus on application of the arm's length standard. The OECD Guidelines do not have force of law, but are influential in many jurisdictions.

The Indian TP regulations are broadly based on OECD TP guidelines. These guidelines are internationally applied by various countries for resolving TP issues. Given India's nascent stage of TP law, it would be necessary to seek guidance from OECD guidelines on various practical issues.

The OECD Transfer pricing Guidelines maintain the arm's length principle of treating related enterprises within a multinational group and affirm traditional transaction methods as the preferred way of implementing the principle. This 'arm's length principle' is set out in Article 9 of the OECD Model Tax Convention. Guidelines as to how this principle should be put into practice were issued in 1979, and were substantially revised and up-dated in 1995. In particular, much new material was then added on comparability (how to tell if a transfer between independent firms is really similar to a transfer within a group) and transfer pricing methods, including profit methods.

However, work still continues on revising the Guidelines. In April 1996 new chapters were published looking at intangibles and services. In August 1997 a new chapter on cost contribution arrangements (CCAs) was issued. In February 1998 Annexes were published containing practical examples and procedures for monitoring the implementation of the guidelines. In October 1999 an Annex was published which covered the Guidelines for conducting advance pricing arrangements under the mutual agreement procedure ("MAP APAs").

At present the work undertaken by the Organization focuses on four key areas:

1. Providing guidance on how to apply the general principles of the guidelines to complex situations, such as permanent establishments, financial services, global trading and thin capitalization.
2. Monitoring the practical implementation of the Guidelines and amending and updating the existing guidance given in the light of this monitoring. The business community, via the Business and Industry Advisory Committee of the OECD (BIAC), is associated with this activity. One outcome of the monitoring process is the development of further practical examples to illustrate the application of the arm's length principle. The extent to which the existing guidance on transfer pricing can be applied to electronic commerce is also being examined.

The improvement of administrative procedures. The various methods of dispute resolution (advance pricing arrangements (APAs), the mutual agreement procedure and arbitration) are currently being examined. Further guidance on undertaking

advance pricing arrangements, especially under the mutual agreement procedure (MAP APAs) is expected to be published in 1999 and Encouraging countries outside the OECD to associate themselves with the Guidelines. This is undertaken by means of multilateral seminars, often with appropriate regional partners, which discuss transfer pricing issues and explain the guidelines to tax officials from non-member countries.

Many countries' transfer pricing law incorporate the 'standard' transfer pricing methodologies set out in the OECD Guidelines (UK). Others, while not incorporating the Guidelines explicitly, recognize the OECD methodologies for calculating arm's length prices (Denmark, France).

However, tax authorities of some territories show marked preference for transaction-based rather than profits-based pricing methodologies (Germany, Italy)

1.2.2 Indian Transfer Pricing Legislation- The Key Concepts

The Table below summarises the Indian Transfer Pricing Legislations in India. Finance Act 2001 substituted the old section of 92 of the ITA by sections 92,92A to 92 F. These sections are the backbone of Indian TPR. These sections define the meaning of related parties, international transactions, pricing methodologies etc.

To appreciate the transfer pricing regulation, understanding of certain concepts is important which follow after the Table.

Legal Position	The Finance Act 2001 introduced with effect from Assessment Year 2002-2003, detailed Transfer Pricing regulations vide Section 92 to 92F of the Income Tax Act ,1961. The Central Board of Direct Taxes (CBDT) has come out with Transfer Pricing Rules - Rule 10A to Rule 10E.
Applicability	Transfer Pricing provisions are applicable based on some criteria : Firstly, There must be an international transaction, Secondly, such international transaction must be between two or more associated enterprises, either or both of whom are non-resident/s.
Pricing Method Allowed	Transfer Pricing provisions are applicable based on some criteria : Firstly, There must be an international transaction, Secondly, such international transaction must be between two or more associated enterprises, either or both of whom are non-resident/s.
Documentation/ Return	13 Different types of documents are required to be maintained. These are - (1) Enterprise-wise documents - Description of the enterprise, Relationship with other associated enterprises, Nature of business carried out. (2) Transaction-specific documents - Information regarding each transaction, Description of the functions performed, Assets employed and risks assumed by each party to the transaction, Economic & Market Analysis etc. (3) Computation related documents - Describe in details the method considered, Actual working assumptions, policies etc., Adjustment made to transfer price, Any other relevant information, data, documents relied for determination of arm's Length price etc. A report from a Chartered Accountant in the prescribed form giving details of Transactions is required to be submitted within a specific time limit.
Penalty	Penalty for concealment of income or furnishing inaccurate particulars thereof- 100% to 300% of the tax sought to be evaded. Penalty for failure to keep and maintain information and documents in respect of International transaction- 2% of the value of each international transaction. Penalty for failure to furnish report under Section 92E- Rs. 100000/-

1.2.3 Key Concepts

• **Associated Enterprises :** As Per Section 92 A of the Finance Act 2001 Two enterprises should be associated enterprises if one enterprises directly or indirectly participates in the management or control or capital of other enterprises, or If one enterprises participates in the management or control, or capital of the other enterprises through any of its intermediaries, or If both the enterprises are managed by the same person either directly or indirectly in the management or control or capital through any of its intermediaries. Management. Direct Control/Control through intermediary.

- Holding 26% of voting power
- Advance of not less than 51% of the total assets of borrowing company.
- Guarantees not less than 10% on behalf of borrower
- Appointment of more than 50% of the BoD
- Dependence for 90% or more of the total raw material or other consumables

International transaction : According to Section 92B of the Indian Finance Act Transaction between two or more AE of which either both or anyone is a non-resident.

It includes transactions such as purchase, sale, lease of tangible property, purchase, sale, lease of intangible property, Provision of services, lending and borrowing of money, includes any cost sharing arrangement and agreement and any transaction having bearing over profit, losses or asset of the associated enterprises.

Arm's Length Price : Arm's length price is the price at which independent enterprises deals with each other, where the conditions of their commercial and financial relations ordinarily are determined by the market forces. The most important aspect of transfer pricing regulations is determination of arm's length price. There are various factors which influence the determination of arm's length price such as principles of comparability, effect of government policy, custom valuations, international set-offs etc. There are different methods prescribed under the Income Tax Act for determination of arm's length price :

Arms length Price

- Price which two independent firms would agree on.
- Price which is generally charged in a transaction between persons other than associated enterprises.

THE "ARMS-LENGTH" PRINCIPLE

The "arms-length" standard has been the benchmark in determining transfer prices for intercompany transactions since the IRS issued regulations under a predecessor to Section 482 in 1935 and pursuant to this standard, the appropriate transfer price of a transaction between two related parties is that price or range of prices that would have been bargained for and agreed upon but for the fact that the related parties had not been related and accordingly deemed "uncontrolled", and is essentially a fair market value standard that requires parties to make hypothetical determinations that are fact dependent, judgmental, and subjective in nature, thus the room for controversy. Global integration and new business practices challenge multinational corporations to find innovative transfer pricing solutions. Stricter penalties, new documentation requirements, increased information exchange, improved training and specialization are some of the tools used by tax authorities in this global "revenue race."

The arm's-length character of a transaction between related parties is best tested by comparing the results of the transaction in question with the results of unrelated taxpayers engaged in comparable transactions under comparable circumstances. The use of comparables is important in all of the arm's-length transfer pricing methods described below. Comparability of transactions to test the arm's-length nature of a related-party transfer price is established by looking at the following factors specified in Reg. 1.482-1(d) :

- Functions performed
- Risks assumed
- Contractual terms
- Economic conditions
- The nature of the property or services

Based on the above list, for two transactions to be comparable, parties should perform the same functions (e.g., research and development, product design, assembly, marketing, administration, transportation, and warehousing) with respect to the transactions. Also, risks borne by the parties to each transaction should be similar (e.g., market risks, research risks, financial risks, credit and collection risks, and general business risks).

With respect to the comparability of contractual terms (e.g., quantity, duration, and warranty), these provisions for the related and unrelated transactions should be comparable. Finally, for purposes of comparison, the economic conditions surrounding the two transactions (e.g., market alternatives, geographic market similarities, size, and composition) should be similar.

Table on Slide 15 (from Paul Barnes Estonia ppt)

1.2.4 OPERATIONAL DIFFICULTIES IN TRANSFER PRICING

However due to difference in the nature of industries, transactions, accounting systems of different enterprises, there are certain operational difficulties in determinations of arm's length price such as:

1. Some intra group transactions are so unique that they can not be compared.
2. Corporate hesitant to disclose information
3. Non availability of proper Comparables
4. Difficulty in justifying the factors having bearing on the prices.
5. In case of rapidly fluctuating price, comparability is difficult
6. Comparability in special circumstances like Startup losses, market strategy, government controls etc.

The Income tax regulations also take into consideration the unique nature of individual transactions which might lead to finding of accurate and absolute arm's length price difficult therefore provision for variability up to 5 percent of the transaction value is permissible.

Illegal lockout at Regency Ceramics

Parul Manchanda
N. Malti

Abstract

This case is about Regency Ceramic, had been a leading company in the Ceramics/Tiles/Sanitary ware Industry. The company from a long time was facing labor issues. The labor unrest which gradually took up pace in the year 2011, was a result of the unheard and repeated negligence of the management towards the Union and the workers. The labor unrest eventually gathered momentum. This lead to the death of the Union leader and the Operations (Head) of the factory. Regency Ceramic from then has tried to resort the company to normal working conditions. The company has tried gaining its position back in the Ceramic Industry in India.

Keywords : Regency Ceramic, Ceramics/Tiles/Sanitary ware Industry, labor unrest, Union, Union leader

Introduction

Regency Ceramic was a flourishing company with an experience of around 25 years in the manufacturing and export of ceramic tiles, walls, exteriors in home and office spaces. The company from the beginning faced difficulties in smooth running of its operations. The major reasons accounting for the same were power cuts and the short supply of LPG prices which were the prerequisites and important raw materials in Ceramic Industry. Confronting all these challenges the company was able to deliver profits to its stake holders. Over the years the company did not do much for their employees, there were no wage hikes for the last 10 years and also the contractual workers were not offered permanent positions even after their long associations with the company. It was in the year 2011 when the continuously neglected and unheard labor entreaties and the management policies violating the labor rights induced the environment of unfriendly management labor relationships. It was in the year

2012, when the company declared a lockout at its production unit at Yanam after the unprecedented violence leading to the death of Sri K. C. Chandrasekhar, President (Operations) and extensive damage done to the plant by the workers, in resentment of the death of the Union Leader, Mr. M.S. Murali.

About Regency Ceramics

Regency Ceramics, incorporated in November, 1983 with its registered office in Hyderabad. The company with its Production Unit at Yanam, Pondicherry. The company was among the flourishing companies in the Indian Ceramic Industry. It designed and marketed its various products such as Floor and Wall Tiles, Vitrified Tiles, Tiles Highlighters, Imported Tiles and Duro Tiles. The company grew its global presence across various territories.

Regency Ceramics was a pioneer in Indian Ceramic Industry. It was established by the visionary leader, Mr. G.N. Naidu who had foreseen the demand for the highly aesthetic tiles, walls and

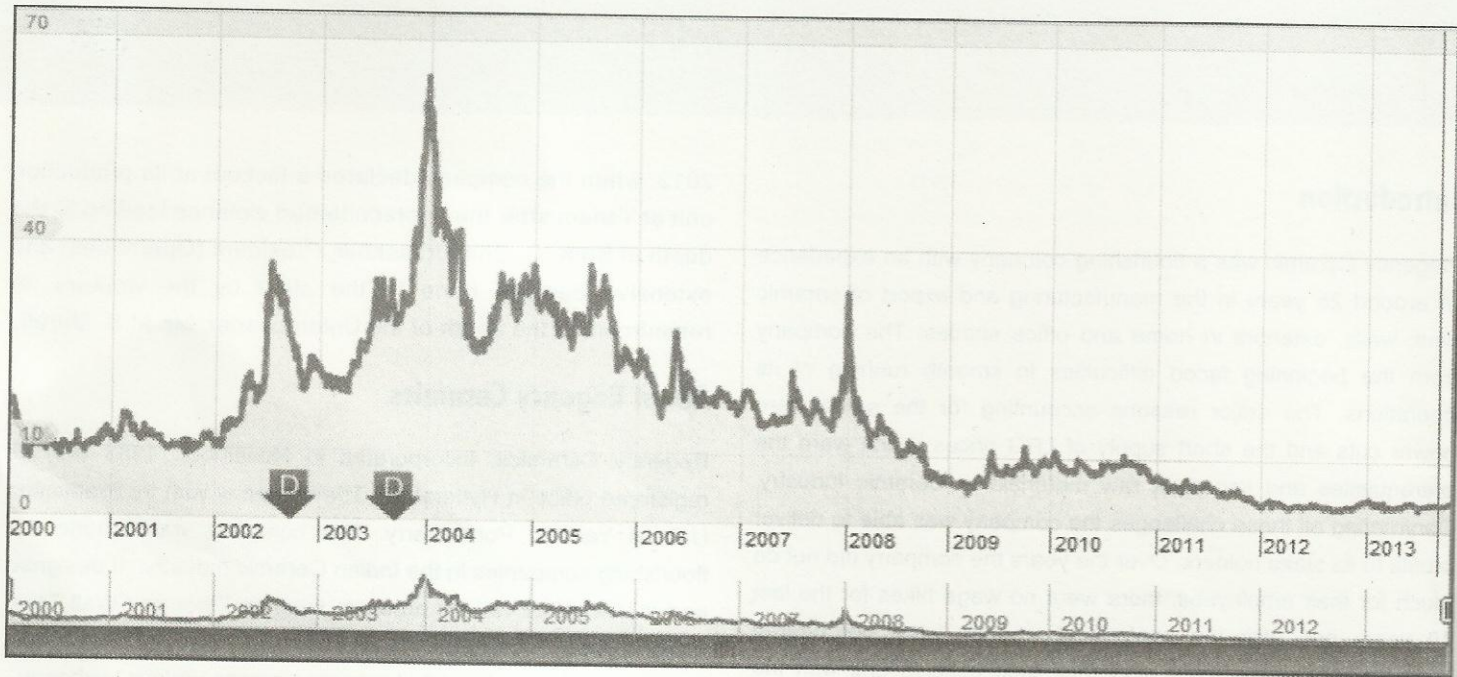
exteriors in the Indian market and the in global market. It formed collaboration with Italian company, Welko Industriale Spa for the supply of distinctive technological knowhow and plant and machinery. The company since then had grown by introducing many designer and innovative tiles. The company had been aiming at expanding its global reach by driving its export of tiles across the various countries. The company constantly aimed at further expanding its geographical territories beyond the focus of the Middle East and the African countries. Since its inception the company has been achieving various accolades for its mantra of achieving excellence through their work. The company was honored with various awards for being the 1st of its kind in Ceramic Industry to receive the recognition from a Recognized Export House by the Ministry of Commerce and Industry, Government of India. The company had also proved itself in the Quality Accreditations, by becoming the only ceramic company of having achieved the OHSAS 18001 certification, which signified the implementation and maintenance of International standards of Occupational Health and thus at the same time had been

practicing safe management specifications in its operations. The company had modern manufacturing facilities in the Union Territory of Pondicherry at Yanam and Karaikal. It also established various manufacturing in China and Italy, to cater to yet another segment of high end customers.

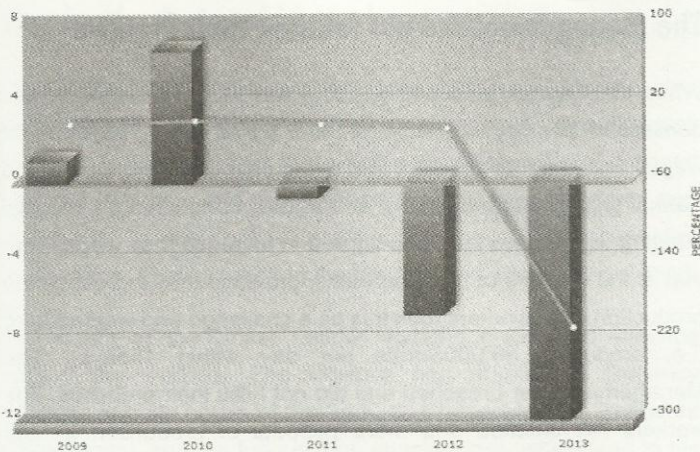
However, Regency Ceramic had been performing and earning reasonable amount of profits over the years, in spite of the various difficulties it faced in running its smooth operations due to hike in the LPG gas rates and the power cut problems. They were trying to manage the things well but not the people. The labor often complained of their entreaties being unheard by the management and thus violating their rights.

Financial Insights of the Company

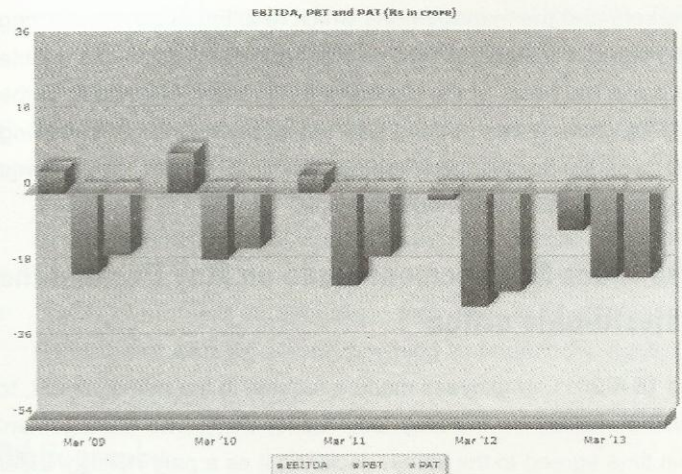
The figures depict the growth pattern of the company over the years. It can be concluded that things were not going well ever since the year 2011, labor unrest in the company. As this was a period of all time low growth pattern over the various years.



(Fig 1: Growth pattern of Regency Ceramics from 2000 to 2013)



(Fig 2: Operating profits of Regency Ceramic)



(Fig3: Earning before Int., Tax, Depreciation, amortization; Profit before tax; Profit after tax)

Year	Turnover (in lacs)	EBITA (in lacs)
2010 - 2011	20687	387
2009 - 2010	17522	936
2008 - 2009	16654	501
2007 - 2008	14439	711
2006 - 2007	15643	2817
2005 - 2006	15346	2368

(Table 1: Turnover and EBITA in lacs)

The Discourteous, insensitive personality of the management and the injustice, inequality done to the Labor led to an unfortunate situation in the manufacturing unit at Yanam.

The Actual Thing that had lead to the unprecedented violence and injustice to the Employees

The workers of the company from a long time always been pushed into situations of unrest and trouble. The management from the beginning was always sorting to the illegal ways of getting the work done through the workers; they often in doing the same violated the Labor Laws that have been formulated to protect the interest of the workers. The Management did not allow the workers to form a Trade Union or to organize themselves into unions, which had further violated the Trade Union Act. The workers who tried doing the same were often removed from the

jobs. The 1st instance of the management using its power and position unrightfully was seen in the year 1989, when the group of workers tried to form a Union. The Management had very promptly issued those workers dismissal orders on false charges. Since then the workers had not dared to organize themselves into a Union. The Management since then had been using its power inequitably against the workers to exploit them in various ways. They were paying low wages to the workers, not adhering to the 8 hour working day norm, nonpayment of yearly bonuses, not paying equivalent wages to the women workers, lack of safe working conditions to the workers, biased promotions, and no payment of wages on a scheduled or fixed date. The Management was also following various other acts that were compromising on the safety and dignity of the workers.

Workers right to organize: Was tried to be taken away through illegal means

The injustice done to the workers was increasing, and it was then the workers decided to form a Trade Union under the leadership of Mr. M.S. Murali. The Management came to know about the pending registration of the Union with the Registrar. It applied the same forceful actions of transferring the workers to the Karaikal Unit or dismissing the workers. The workers had made various entreaties to the Management but they were like always unheard. Thus the workers were left with no other option but to approach the Labor officer, Pondicherry. There was a conciliation process that had been carried to bring about a settlement between the

workers and the management, which resulted in the transferring of 3 workers instead of 11. The Management though was unable to prove the basis of the transfer (requirement of workers at the Karikal Unit). It was nothing else but an intention of not allowing the workers to organize themselves into unions, which was against what is mentioned in the law.

The chaos Management made on May Day and the unjustifiable action

On 18-4-2011, employees made a request to the management, to avail a Holiday on the May Day (Labor Day). The Management that time agreed to the same, declaring it as a paid Holiday. Later the Management heard of the workers unity and their celebrations of May Day together at the outskirts of Yanam. They Management secretly on 2-5-2011 wrote to the Union, that the workers took a deliberate off to affect the production of the Company. It was from 3-5-2011, the Management started victimizing the workers. They dismissed around 60 workers; among those were workers who had been working in the company for around 15 years. The workers then approached the Assistant Labor Inspector (ALI) who took into consideration the issue of illegal termination of around 54 workers and brought down the matter to conciliation. Further the Management used its all power to put all false and frivolous allegation on the Union leader Mr. M.S. Murali thus leading to his dismissal. The Management did all this to assure that the workers could not organize themselves into a Union.

No attention to the Charter of Demands

It was becoming difficult for the workers to sit quietly, they presented a charter of Demands to the management on 25-05-2011. The charter represented the various demands that were being unheard and unquestioned for all these previous years. The Management did not even give a thought to the charter of demands. The workers had then approached ALI for seeking intervention into the matter. The Charter of Demand remained pending with the ALI. The Management parallel on the other hand filed a petition with the High Court questioning the registration of the Union.

The Management did not fulfilled their Promise

While the Charter remained pending with ALI. The workers had demanded the regularization of contractual labor, payment of wages and equal bonuses of that being paid to the workers at the Karikal unit. The Management at that time conducted an informal meeting with the workers and agreed to increase their wages with that of the workers of the other units, provided they increased the production. The workers took this as a challenge and worked hard (i.e. producing 36,000Sqmts per day within 15days). The Management later breached and did not fulfill their promises. The workers felt cheated and mere puppets of production for the company.

Ways the Management used to threaten the Employee

The management further threatened the workers, on destroying their careers if they further demanded anything. They also had suspended the Union Office bearers in November 2011. The workers had then opposed to the suspension of the Office bearers. The Management further retaliated to this by keeping the workers idle and not assigning them work and this scenario had continued from November till January. The company did not pay salaries to the workers for the month of November. All this had brought down the production of the factory unit to an all time low.

The Management then accused the workers for low production for the period, which was false as the management intentionally did not provided them work. They had forced the workers to sign an undertaking stating the same. Around 800 permanent workers refused of the same. On which the Management declared that people who did not signed the undertaking will not be allowed to enter the factory premises.

No Intervention was done by Authorities to protect the rights of the Employees

During all these times, ALI made no efforts to protect the rights of the workers. The workers then resorted to sit for a campaign on the outskirts of Yanam on 5-01-2011, thus requesting the government authorities to look into the matter. But no authorities came into the picture for the workers rescue.

The deaths that could have been avoided

On 27-01-2011, some workers and Mr. M.S. Murali were discussing union affairs almost 300 meters away from Regency Ceramic, it was then that some police people came and dragged Murali to the jeep and then he was beaten black and blue, and collapsed in the police station. Upon workers repeated persistence, he was taken to the hospital and was declared dead.

The death of the Union Leader agitated anger and violence among the workers. The violence had erupted at Regency Ceramic and the house of the Sri K. C. Chandrasekhar, President (Operations), and the furious mob attacked him, which lead to his death.

Illegal lockout had been declared by the Company

After three days, on 31-1-2012, the management declared a lock-out at the Regency Ceramics, while no prior notice for the same was issued to workers. The management announced the lockout on the instance that the workers were being in cooperative with the management and resorted to an illegal strike, which had affected the Company's production capacity, also tried to destroy the machinery at the company.

Conclusion

During the entire incident of **Regency Ceramics Ltd**, there were various instances where injustice was done to the employees, through various means. They were not heard, no attention was given to them and further the management used coercion to get things approved of and the workers were also otherwise threatened. Some instances showing the same are as follows:

- The lock-out had been declared by the Management without prior notice to the workers, which was again unjustifiable.
- The Management argued on the fact that the workers had affected the Company's machinery, which was not true. The damage occurred to the factory was low and would not have affected the running of the company.
- The undertakings which the Management was forcing the workers to sign was unfair and against the labor law. Thus on that particular instance, the Management should not have denied entry of the workers to the factory premises.
- The low productivity blame for the period November to January

was put on the workers, which was actually not the truth. This was because the management had intentionally themselves not assigned work to the workers.

- The Management said the workers went on a strike, which was not true. The workers never initiated a strike. The management also had not approached any authority before declaring a lock-out and complaining the same about the workers.
- The Government authorities, and the ALI of Yanam, Pondicherry also did not do anything to protect the rights of the workers.

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Teaching Notes :

Case Synopsis :

This case is about Regency Ceramic, a leading manufacturer of sanitary ware in the Indian Ceramic Industry. This case clearly illustrates the various instances of ignored labour issues over the years, which consequently leads to unprecedented violence in the factory premises leading to death of the Union Leader and the Operations Head of the factory.

Target Audience :

This can be useful for the students of Industrial Relations/ Labour Laws/ Industrial Law

This case would be actually appreciated by students only if they are aware of the certain laws of Industrial Relations and their applicability.

Learning objective

This would actually help the students analyze and further comment upon the long in time applicable laws in India, for the peaceful industrial relations between the management and the union.

This is important for a student of Industrial Relations/ Labour Laws to make further suggestions on the applicability of Laws across India.

A detailed Teaching Plan:

Suggested time for this case study would be around 50 – 60 minutes.

Suggested student assignment related to this could be, bringing out the various instances in the case where the various laws have been violated by the management.

Teachers should support this case, with other relevant cases from the industry that would actually help the student understand the current scenario.

A study on the management of human resource personnel in Indian domestic Bpo industry

Simarjeet Kaur

Abstract

The Indian IT industry has earned a reputation in the world in the form of developing world class software for banking sectors. The success of Indian IT industry has given birth to IT enabled services in the form of Business Process outsourcing also commonly known as BPO industry. Prior to the recession, BPO industry was the fastest growing industry in the world. This industry had revolutionized the world in the form of providing quality services with low input costs and high returns. The majority of the employees in the BPO sector are young, energetic and are able to work continuously at a very long stretch. Thus, managing the human resource in the Indian BPO industry becomes a challenge.

This paper is thus an attempt to provide a detailed study on the dynamics of managing human resource workforce in the BPO industry by taking into account several key parameters which form the crux of the management practices. The design of the paper follows a structured approach. It starts off with providing an introduction to the working of human resources in the BPO industry gradually transcending to providing the concepts of the outsourcing. Once this is done, it moves on to more detailed concepts related to the objectives, the research methodology and the treatment of data and finally implications and conclusions.

Keywords : Challenge Human Relations, Managing, Outsourcing

Introduction

Human resources may be defined as the total knowledge, skills, creative abilities, talents and aptitudes of an organization's workforce, as well as the values, attitudes, approaches and beliefs of the individuals involved in the affairs of the organization. It is the sum total or aggregate of inherent abilities, acquired knowledge and skills represented by the talents and aptitudes of the persons employed in the organization. The organizations always remained concerned about the human resource and tried to design different approaches for their well being. The early part of the century saw a concern for improved efficiency through careful design of work. During the middle part of the century, emphasis shifted to the employee's productivity. Recent decades have focused on increased concern for the quality of working life, total quality management and worker's participation in management. These three phases may be termed as welfare, development and empowerment. Today, human Resource Management has come to be recognized as an inherent part of management, which is

concerned with the human resources of an organization. Its objective is the maintenance of better human relations in the organization by the development, application and evaluation of policies, procedures and programmes relating to human resources to optimize their contribution towards the realization of organizational objectives. It helps diagnose the organizational and industrial problems in an organization. It helps maintain an active network with the key managers in an organization. It helps in managing performances of the employees with respect to the organizational goals. It helps in creating the right atmosphere in the organization for implementing change.

Outsourcing : The Concept and its present state in India

Outsourcing refers to the delegation of non-core operations from internal production to an external entity specialized in the management of that operation. Instead of being the jack of all trades, the smart organizations have now redefined the way of working and now aim at being the master of their core business.

Outsourcing the non-core processes in order to concentrate on the core ones is how the companies prefer to work now. BPO has become the obvious strategic choice of the companies looking at the visible profits of cost reduction while improving the quality of service, increasing shareholder value etc. (Shah and Sharma 2006). Typically outsourced business segments include information technology, human resources, facilities and real estate management, and accounting. Many companies also outsource customer support; manufacturing and engineering to market have also gained importance.

According to the study conducted by NASSCOM and Everest India, Indian outsourcing industry is continuing its journey as the global leader in outsourcing market and 2012 is considered to be a landmark year for the industry. Despite the uncertainties popping up in the global outsourcing market owing to slow recovery of U.S economy from Wall Street crisis coupled with **Euro crisis**, Indian BPOs have maintained their growth. The industry continues to be a net employment generator - expected to add 230,000 jobs in FY2012, thus providing direct employment to about 2.8 million, and indirectly employing 8.9 million people. Domestic BPO segment is expected to grow by 17 per cent in FY2012, to reach Rs 149 billion, driven by demand from voice-based (incl. local language) services and increasing adoption by both traditional and emerging verticals, including the government. Looking at the magnitude of the industry size (500+), the president of NASSCOM, Mr. Som Mittal announced in NASSCOM Strategy Summit 2012, New Delhi, that the acronym BPO, for Business Process Outsourcing, does not reflect the industry as it stands today, and hence forth, it will be replaced by the term BPM or Business Process Management.

It is, no doubt, one of the toughest tasks for an HR manager in this sector, to bridge the ever-increasing demand and supply gap of professionals. He has to find the right kind of people who can keep pace with the unique work patterns in this industry. **The sincerest concern for an HR manager in BPO industry in India is, however, the high attrition rate which is approximately 30-35 percent at present. Adding to this is the issue of maintaining consistency in performance and keeping the motivation levels high, despite the monotonous work.**

Review of Literature :

In order to understand both the concepts of attrition and human resource management, we need to study the literature in the light of both.

Khan, Sami A. (1998) in his paper has tried to present the transformed face of Human Resource Management from Management development to development especially in the 21st century and the globalize world and concludes that the impact of the transformation of the HR function and processes should be measurable and HR programs have to be more answerable in short and long term perspectives. While Satpathy, B (2002) studied the problem of finding out an alternative solutions to the work life equation based on Indian philosophy and Indian culture and develop a model called 'Management By care' to deal with such problems arising in Indian organizations, Seth, Satish (2004) explained that attracting and nurturing talent has become the single most dominant force and emphasized that talent can flourish only if the enabling social and physical infrastructure is in place. On one side, Punia, B. K., (2004) addresses the specific contemporary challenges of employee's retention and empowerment in the light of organizational changes taking place highlighting the fact that Indian organizations are finding it difficult to retain the talent and are resorting to newer strategies of empowerment to retain the best talent while on the other side Joshi, Rashmi (2008) explains that in view of the consequent attrition that is often a major setback to a company on various fronts, the practice of rehiring former employees is in fact catching on to recall exceptional talent, especially when the organizations face a severe shortage of trained, skilled personnel.

While reviewing the literature available on attrition and employee retention in BPO industry, it has been observed that most researches in the HRM have addressed only specific problems related to its environmental analysis like challenges, growth and opportunities, the problem of attrition, the HRM systems, and issues of job stress, job satisfaction, individual performance etc. Researches carried out in the area of employee motivation, performance management and employee satisfaction have been done in the areas like education (Sharma and Jyoti 2008, Smerek and Peterson 2006), Pharma industry (C.H. Unnikrishnan 2008) consumer durable industry (Bhattacharya, Subhashish 2004), Petro-chemical industry (Patrick M Wright, Blaine McCormick,

Sherman, W. Scott and McMahan, Gary C. 1999), etc but BPO sector has not been explored to a great extent. Literature review has also shown how various researchers have identified very many reasons behind the escalating problem of attrition and how many of them have even suggested recommendations to control it (Misra 2007, Prakash and Chowdhary 2004, Joshi 2004). Many researchers have also worked on various domains like the HRM systems and practices (Budhwar et al. 2006), job satisfaction (Sharma 2006, E-sat survey 2005), and burnout syndrome (Kanwar et al. 2008). However, no systematic and comprehensive work has been found that collaborates **all the facets viz.** retention, **employee motivation, new industrial approach, leadership, talent management** etc. to combat the most burning issue of the present times i.e. attrition. A few of the research studies relevant to the issue are mentioned here. Ranjit Shastri (2004) writes that while the steady supply of new recruits has helped fuel the growth of call centers in India, attrition has held the industry back and a major cause of attrition is the poor people skills of team leaders and senior management. Niharika opines that continued high growth in an industry can be issues because it strains systems and governance processes that need time to mature and to be institutionalized. Indian BPO industry is currently facing the challenges arising out of its stupendous growth. Santoshi Sen Gupta and Aayushi Gupta (2008), study the challenges posed to BPO organizations at various levels and find that at the lower management level, the major challenges include meeting targets, dealing with customers and maintaining work life balance; at middle level management the major challenges are to motivate employees and handle attrition and absenteeism while at upper management level, clients' demands, motivation, competition and costs are the major challenges.

While studying the causes of high attrition rate, Aashu Calappa, VP-HR, ICICI OneSource, says that accountability puts employees under stress but companies are now making efforts to help their employees cope with stress because it is an occupational hazard. Prashant Chawla, COO, Integreon, a Mumbai-based KPO (2006), says that there are three types of stress an employee may experience — tight deadlines, repetitive nature of the job and late night shifts. Anupama D.Raina, (2006) mentions main reasons for attrition are: health problems (43% respondents), physical strain, no time for personal life, long working hours, odd shifts (42.35% respondents), long transit time, insufficient leaves and slow growth, digestive problems

(37% respondents) etc. Prof. M.Scalem & Adarsh Ravindranathan, (2006) evaluate that major factors leading to high attrition rate are : Poaching, hiring policies and HR systems, Monotony of the job, lack of career movement and growth aspirations and nature of training. R.Raman (2006) mentioned reasons for Drag Attrition as insecurities, vulnerabilities, very few chances of promotion, no scope for skill up gradation, stress, chronic fatigue, health problems, loss of personal life etc. whereas for Drive Attrition are employer's policy, policy for terminating the employee, no entitlement for national holidays. Ramiya.bhas (2008) tries to find out the reasons for employee attrition other than compensation or salary and accordingly one of the top reasons for talent attrition is "external equity of compensation".

According to McKinsey & Co., the industry leaders who are setting best practices in human resource management and retention actually pay less than the laggards and are leveraging effective people management practices rather than higher compensation to keep their teams intact. This is especially true in case of large players; where they continue to employ 2,000 personnel every quarter—to bring down the sourcing cost effectively. The BPO companies have tied-up with colleges to train the talent while they are doing their college degree. This has proved to be an effective model for cost reduction as well as manpower retention. Mr Anupam Prakash (2005) recommended a change in the workforce profile through a change in the education system. Mr Dan Sandhu, CEO, Vertex India (2005), felt attrition in BPOs was not 'the problem' but the output of other problems in a company. He emphasizes the importance of bringing change in the candidate's attitude to match the company's value structure. Girish Suryavanshi, Associate VP, Mphasis (2006) said that though India is still a preferred outsourcing destination, there is a need to improve infrastructure growth in the cities where BPOs have a large presence. Another interesting thing that emerged from prior researches is that reducing attrition may not always mean increasing retention. Attrition may reduce if the negative characteristics of the job are taken care of. However, that does not mean employees increase their willingness to stay in the same organization. Thus, different set of factors emerged for attrition and retention respectively. There is a dire need of tackling the problem of attrition in the BPO industry of India and for this various HR practices need to be implemented simultaneously.

Significance of the Study:

In the light of above stated facts, the relevance and significance of current research paper is enhanced as its findings will help HR managers of BPO sector who continuously strive to maintain balance between the demand and supply of competent and suitable employees for their organizations. In order to understand the cause behind this rat race, it is necessary to understand the major challenges HR managers face due to competitive environment and their direct or indirect impact on the rate of attrition in the industry.

Research Objective :

- To highlight the challenges in respect to HRM practices in BPO sector
- To identify the relationship among different identified challenges

- To analyze the nature of relationship between HRM challenges and the size of the organizations
- To analyze the nature of relationship between HRM challenges and the duration of being in the business

Research Methodology:

The study is based on the primary data collected by way of administering a structured questionnaire to the HRM practitioners of various domestic BPO organizations in Delhi and NCR regions. Some of the BPO organization where the data has been collected include Genpact, EXL and IBM. While collecting the data, the practitioners approached were of all ranks and all departments of HRM: recruitment, training, salary administration, strategy management etc. The questionnaire was sent to 75 practitioners but the usable responses received were only 50 resulting into a response rate of about 66 percent.

Data Analysis:

Table 1 shows the percentage of responses of HR managers of domestic BPO industry in relation to the ten HR Challenges.

Table 1 : Percentage of responses in relation to the ten challenges on five point scale.

Challenges/ responses	Very high	High	Neutral	Low	Very low
Performance management	8 (16%)	11 (22%)	17 (34%)	10 (20%)	4 (8%)
Work life balance	7 (14%)	12 (24%)	15 (30%)	8 (16%)	8 (16%)
Changing employee expectation	8 (16%)	9 (18%)	13 (26%)	19 (38%)	1 (2%)
New industrial approach	12 (24%)	9 (18%)	9 (18%)	16 (32%)	4 (8%)
Compensation	00	16 (32%)	11 (22%)	16 (32%)	7 (14%)
Succession planning	4 (8%)	7 (14%)	19 (38%)	13 (26%)	7 (14%)
Leadership	12 (24%)	5 (10%)	17 (34%)	5 (10%)	11 (22%)
Talent management	6 (12%)	14(28%)	17 (34%)	3 (6%)	10 (20%)
Interpersonal relationship	5 (10%)	18 (36%)	12 (24%)	9 (18%)	6 (12%)
Attrition	6 (12%)	12 (24%)	3 (6%)	18 (36%)	11 (22%)

It has been observed that 38% respondents think that performance management is a challenge of high order out of which 14% categorize it of very high order while 16 % think it is not a challenge at all.

Work life balance is considered **neither a very high order challenge** nor a very low order challenge. **While 34% of the respondents** remained neutral on the issue, **38% think that it is a challenge** not of high order.

Changing employee expectations is a low order challenge as per the responses given by HR professionals of domestic BPO sector. 40% of the total respondents think it a low order challenge while 26% of them remained neutral on the issue.

New industrial approach seems to be a challenge good enough for the HR professionals of domestic BPO sector. 42% of the total respondents ranked it as a high order challenge while 18% remained neutral on the issue.

Compensation is not ranked as a very high order challenge. 32% of the respondents feel that it is a challenge of high order while 46% of the respondents treat it as a low order challenge.

On the issue of Succession planning, majority of the professionals do not think it either a high order challenge or a low order challenge. 38% of the professionals have remained neutral while only 8% of the professional have considered it a challenge of high order and 14% of them consider it as a low order challenge.

Dealing with the challenge of leadership, the majority of

professionals treat it a challenge of high order (40%) and equal no think it neither of high order nor of low order (34%) while 20% perceive it as a low order challenge.

Talent management is considered neither a high order challenge nor a low order challenge. The almost even distribution of the percentage across the range explains this point of view of HR professionals of BPO sector in India. The only significant number (34%) is of those who neither take it as high order nor low order challenge as they remained neutral on the issue

Majority (46%) of HR professionals of domestic BPO sector in India think the challenge of dealing with challenge of high order and only 12% think it as a challenge of very low order.

Attrition, which is the most talked about challenge in HR circles these days is viewed differently by HR managers of domestic BPOs. Overall figures show that more than 50% think it as a challenge of either low order or of very low order (58%) while only 36% treat it as a very high order challenge or a high order challenge.

Table 2 : Overall Mean and S. D. of Various Challenges of Domestic BPOs

Challenges/responses	Mean	Rank	Standard deviation
Performance management	2.96	5	1.277
Work life balance	2.82	1	1.173
Changing employee expectation	2.92	3	1.140
New industrial approach	2.82	1	1.135
Compensation	3.28	7	1.070
Succession planning	3.24	6	1.117
Leadership	2.94	4	1.284
Talent management	2.96	5	1.442
Interpersonal relationship	2.86	2	1.196
Attrition	3.32	8	1.377

On tabulating the overall mean score of all the ten challenges, it is observed that work life balance and new industrial approach are the challenges of highest order, i.e. the HR managers of domestic BPOs perceive that helping the employees to manage the work life balance and following the guidelines of new industrial policies

are the most challenging areas. On the other side, the most talked about challenge in all industries, i.e. attrition is not perceived as a challenge of high order as it gets lowest rank in the perception of HR managers of domestic BPOs.

Table 3: Mean scores of Perception of HR managers of Ten Challenges in relation to Number of years in Business

Challenges/responses	1-10 years	11-20 years	T-value	Significance
Performance management	2.79	2.91	-0.253	0.804
Work life balance	2.92	3.09	-0.35	0.731
Changing employee expectation	3.03	2.55	1.033	0.32
New industrial approach	3.21	3.55	-0.953	0.354
Compensation	2.95	2.36	1.533	0.14
Succession planning	3.18	3.45	-0.969	0.341
Leadership	3.13	2.27	2.694	0.012*
Talent management	2.87	3.27	-0.853	0.405
Interpersonal relationship	3.18	3.82	-1.698	0.103
Attrition	2.82	3	-0.372	0.715

Source: Primary data

*significant at 95% level (p 0.05).

When t-test was performed to study the perception of HR managers working in domestic BPOs in relation to their length of existence in business with challenges, it has been observed that the difference in means is significant for only one challenge out of

ten challenges i.e. leadership. This significance highlights the importance of effective leadership and helps to understand that the length of being in business is directly related to the result oriented leadership.

Challenges/ responses	Small	Medium	Large	F-value	Significance
Performance management	3.00	2.13	2.75	1.886	.163
Work life balance	3.06	2.88	2.63	.385	.683
Changing employee expectation	3.24	2.38	2.13	4.806	.013*
New industrial approach	2.94	2.63	2.50	.445	.644
Compensation	3.32	2.88	3.50	.763	.472
Succession planning	3.15	2.50	2.50	1.404	.256
Leadership	3.26	2.88	3.50	.643	.530
Talent management	3.12	2.13	3.13	1.638	.205
Interpersonal relationship	3.76	2.13	2.63	7.297	.002*
Attrition	3.00	2.38	2.75	.923	.405

Source: Primary data

*significant at 95% level (p 0.05).

When f-test was performed to study the perception of HR managers working in domestic BPOs in relation to the challenges w.r.t to the size of the organization, it has been observed that the difference in means is significant for two challenges out of ten challenges. The changing employee expectations and attrition show significant difference. Where HR managers of small and medium size domestic BPOs find the challenge of changing employee expectation different as compared to the managers of large size domestic BPOs, attrition is perceived differently by HR managers of small and large size organizations as compared to HR managers of medium size domestic organizations.

Findings and Implications of the study

From the above discussions, it is evident that when it comes to knowledge based industry the management of the human resources becomes a challenging task and complex task especially in this hyper competitive and complex world where the forces of recession, forces of technological advancements and the forces of competitions are growing at leaps and bounds. In such a scenario, where the demand is more than the supply, the HR unit is concerned with the herculean task of managing the balancing the wheel between the attrition and the retention of the crucial talent, meeting the demands of the business and the organization as well as meeting the personal goals of the staff members .

It is observed that the challenges pose equal threat to the HR Managers whether they are from small, medium or large organizations but there is slight variation in the perception of HR managers on changing employee expectations and attrition in relation to the size of the organization. Another observation is that leadership is an important, crucial but key factor for the survival of the organizations in this competitive world and providing effective leadership is a challenge for HR managers in domestic BPO industry.

Conclusion and Managerial Implications:

As per the data analysis, it is believed that the challenges can turn out to be a real dampener in the growth of this industry if they are improperly addressed. The study helps the HR practitioners in BPO sector to get insight into the relationship between important HR challenges and their relationship with the most important

issue i.e. its existence in the competitive environment so that they are able to do something about it. It also would be helpful for the HR practitioners to focus on the right cause and to get insight to choose the right practice to manage this challenge. HR managers need to put in efforts on the development of their employees, building new and innovative retention and motivational schemes (which was more money oriented so far) and making the environment challenging by providing effective leadership so that the employees get motivated while working in this environment.

Limitations of the study :

Though the author has tried to cover most of the crucial parameters, however, when it comes to the question of demand and supply in the BPO sector, several parameters *which indirectly pose challenge* to HR practitioners such as workforce environment, career development of the staff members etc. have not been addressed or taken into account. The study has been conducted by keeping the employee as the focal point. However, if the HR policies, the HR goals and objectives would have been taken into account , this study would have given more holistic view of the BPO industry.

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A Study of the Significance of Business Communication in the Hotel Industry of Dubai

Mubeena Iqbal

Abstract

In today's world of globalization and borderless economy, effective communication is crucial for successful functioning of any industry. English has emerged as the language of business and trade and is accepted as the standard for communication. Effective communication, therefore, ensures a balance between organizational objectives and each party's views leading to streamlined actions as well as organizational success and profitability. Tourism industry is one of the fastest growing sectors and a major revenue earner, not only in the Middle Eastern emirate of Dubai, but of various economies all over the world. Hotel industry, which is an integral part of the tourism industry, is diverse in nature as it accommodates employees and guests, with different language, ethnic and cultural backgrounds. Hotel industry is a core service industry which revels in people interaction and experiences. As English is the language of the globalized business world, effective and excellent communication and adequate English language competency is essential for better guest experience and hence better efficiency, productivity and , in the long run, profitability of the hotel industry.

Though, effective communication is significant in the hotel industry, workplace communication in the hotel industry has over the years remained an issue which urgently needs to be addressed today. This paper therefore discusses in depth, communication in the hotel industry as well as its importance. Additionally, it seeks to highlight the significance of proper business communication methods in the hotel industry of Dubai and to understand the contribution of English language competency skills of employees towards organizational efficiency and productivity.

Keywords : Globalization, Tourism industry, Productivity, organizational efficiency, competency skills

Introduction

Hospitality is a harmonious mixture of tangible and intangible components- food, beverages, beds, ambience and the environment; and the behavior of staff (Cassee and Reuland, 1983). With the growth of hotel industry in Dubai communication competence of the staff requires scholarly attention today. The scope of the present study is focused on the hotel sector of the hospitality industry.

1.1. Nature of the Hotel Industry in Dubai

In the past few years, Dubai has been recognized for the growth trend of its hotel industry, primarily due to its upscale qualities in terms of tourism destinations. There is an increasing need for educating staff in communication skill to enable the industry to forge ahead. The need for proper communication is also important since the United Arab Emirates is a common destination for many tourists around the world. It is therefore important that the correct

skills are put towards the overall management and profitability of the hospitality industry is ensured.

Towards the beginning of the 21st century, Dubai experienced a significant departure from its reliance on hydrocarbons for revenues as most people moved towards the service-sector economy (Baum, 2006). Tourism has been the greatest contributor to economic growth in Dubai since the early 1990's and the trend has continued (Oxford Business Group, 2008).

Various developments, aimed at improving the hospitality industry in Dubai in the previous years, and efforts were made to appeal the outside world to increase revenues. In terms of growth of its hospitality industry, Dubai can be described as an Emirate that always possesses the desire to be 'bigger' and 'better' icon in the whole world (Baum, 2006). The developments in Dubai reflect world's experiences, with a careful combination of shopping, hotel and entertainment opportunities in a single location, appealing to consumers' needs. As such, Dubai has acted as the pioneer of the post-modern recreational tourism and hospitality industry.

1.2 Different Levels of Communication in the Hotels

The employment of proper communication strategies in the hospitality industry all over the world is an important aspect that ensures satisfaction of the management, staff and customers alike (Oxford Business Group, 2008). Communication is vital to the customer because it imparts a feeling of satisfaction as he pays for the product and for the service being offered. Communication in hotel industry covers mainly two areas : customer service and the interactions between the staff and management (Barrows & Powers, 2008). A proper coordination between two is therefore essential for high quality services expected of the industry.

Proper hospitality communication between the staff and the management also adds value to the services and products being offered. Good communication between staff and management is the epitome of communication in this sector because it is passed to the level of communication between staff and guests (Andrews, 2007).

Potential clients in any hotel setting expect to find a cool and lovely environment so as to willingly spend their money on such a facility. A happy and relaxed atmosphere assures the management and staff that their guests will return and recommend their facility (Baum, 2006). Communication skill in the hotel industry, therefore, plays a big role in the establishment of relationships between members of organizations and those that visit these organizations. Organizations rely on culture and communication methods to ensure trust and satisfaction among their members (Andrews, 2007). Proper communication helps reveal possible problems and ensures that tasks are made smoother, creating quality services and products for their customers. In a service-oriented sector such as the hotel industry, it is important that communication skills are emphasized for both written and spoken aspects, so that the sector can run smoothly because its service delivery depends on how information is passed to its customers. Dubai's hotel managements agree on the importance of communication in the sector and are willing to spend adequate sums of money to ensure that all employees are trained in written English language skills, but only a small percentage of employees undergo in-house training. However, there is one another setback that is the lack of a system that could ensure English language competency of all the hired employees.

1.3 Usage of Business English Communication in Hotels in Dubai

The hospitality industry in Dubai primarily relies on oral communication for making sales because it involves convincing potential clients about the uniqueness of the services and products available in the hotel. Oral and written forms of communication in hotels in Dubai are not used in similar proportions. In this regard, the hotel industry in Dubai relies heavily on oral form of communication (Andrews & Andrews, 2007).

Effective communication helps increase job satisfaction, safety, productivity and profitability and increases overall business turnover. Effective communication should therefore be aimed at starting from the lowest level if information is to reach everyone.

It is important to note that the two broad groups of communication in an organization will employ either oral or written skills to pass information from one person or point to another. In Dubai hotels oral communication is the most common form of passing information. Whether it is a new customer being introduced to a menu or giving details about a guest room, oral communication is most in practice. Also, it is vital for passing data to colleagues and calling people to an urgent meeting. Sometimes the urgency required to pass information across employees does not allow the use of other ways of communication (Harris, 2007).

Effective written English Communication skills are of key importance in the hospitality and tourism industry, as guest satisfaction is the key driver to revenues. Employees in this sector must develop the necessary communication skills to fulfill tourist requirements. In return, efforts employed on communication are analyzed according to their impression on guest satisfaction. For hospitality organizations, internal written English communication serves as the nerve center, which if not functioning properly leads to loss of guests and eventually the organization fails. Additionally, advanced internal solutions to communication form the basis of a wide range of guest services, enhancing guest motivation to stay. In return, satisfied guests lead to a stronger and more competitive market position, customer loyalty and increased profits. Achieving tourist satisfaction requires an understanding of performance expectations. Hence proper written English communication skills are of high importance to hospitality practitioners in different position levels. To ensure quality and performance standards in

Effective written English Communication skills are of key importance in the hospitality and tourism industry, as guest satisfaction is the key driver to revenues. Employees in this sector must develop the necessary communication skills to fulfill tourist requirements. In return, efforts employed on communication are analyzed according to their impression on guest satisfaction. For hospitality organizations, internal written English communication serves as the nerve center, which if not functioning properly leads to loss of guests and eventually the organization fails. Additionally, advanced internal solutions to communication form the basis of a wide range of guest services, enhancing guest motivation to stay. In return, satisfied guests lead to a stronger and more competitive market position, customer loyalty and increased profits. Achieving tourist satisfaction requires an understanding of performance expectations. Hence proper written English communication skills are of high importance to hospitality practitioners in different position levels. To ensure quality and performance standards in this industry, the supply and demand side should be able to communicate effectively (Guffey & Loewy, 2009). Besides oral communication, written communication skill also plays an important role because if properly used in the organization, it enhances effective performance of its employees, which in turn results in growth and development from high productivity and efficiency. Oral communication smoothens the speedy functioning while written communication creates working environment by eliminating misunderstanding, confusion and distortion of information. Written English communication also enhances a sense of work satisfaction and promotes interpersonal relationship through the use of powerful words, messages and presentation. Efforts need to be made to bring written English competency equally in practice.

1.4 Contribution of Business English Methods of Communication to Organizational Efficiency and Productivity

As guest satisfaction is the key driver to revenues in the hotel industry, efforts are underway to develop necessary communication skill in hotel industry in Dubai. The objective is to create stronger and more competitive market position. Proper written English communication skills are of primary importance to hospitality practitioners in different position levels. To ensure quality and performance standards in this industry, the supply and demand side should be able to communicate effectively (Guffey &

Loewy, 2009). Oral and written communication skills play an important role because if properly used in the organization, it will enhance the performance level of its employees, which in turn results in growth and development from high productivity and efficiency. Effective written and oral English communication skills in the hospitality industry are used to promote the organization and the services offered for maximizing revenues. Communication is necessary for exchanging information, making plans and proposals, reaching a consensus, executing decisions, sending and fulfilling orders and for sales and promotions. It is necessary, therefore, for those working at the operational level in the company to communicate effectively among themselves, with the management and with guests to achieve stated goals.

Effective communication means effective handling of the organization's concerns. The Hotel Industry also must have an organized communication policy and channel it for speedy and effective communication within and outside the organization. This prevents delays and creates harmony and a good working environment by eliminating misunderstandings, confusion and distortion of information.

Research Methodology

The study primarily concentrates various local, foreign and international hotels in Dubai. The data was collected through telephone interviews and follow up fact to face interviews. The target sample consisted of ninety respondents who were selected using random sampling method from various hotels in Dubai. The participants consisted of human resource managers and managers working at the top level and middle level in the organization.

Only one set of questionnaire was used to collect data from the respondents.

Data collected was analyzed through one dimensional Chi-square test. T-test was used in determining accuracy of data collected and determining minimum errors encountered in tabulation of results. A.01 level of significance was used to test the results of the study after which the results were tabulated in figures, percentages and pie charts. All the research questions were assessed in general and conclusions made.

Analysis of Results

3.1 What kind of Business English methods of communication does your organization use frequently?

	Percentage of the response received
Written	0.0%
Oral	7%
Mostly written and partially oral	0.0%
Partially written and mostly oral	0.0%
Both Oral and Written	93%
Total	100%

This question sought to determine the frequently used in Business English methods of communication in various hotels all over Dubai. As indicated in the table above, 93% of the respondents reported that both written and oral communication methods were frequently used in their organizations as Business English methods of communication. Additionally, 7% of the respondents interviewed indicated that the most frequently used Business English methods of communication was oral. The research survey findings, therefore, indicated that many organizations use both written and oral English methods of communication to communicate within their organizations and only few organizations frequently use oral method of communication.

3.2 In your own opinion, why are these methods important to hotels and what value do they add to your organization if effectively used?

All were in support of the Business English Communication method as it formed the backbone of the industry across the globe. **English has surfaced as the global speech of business communication, mainly in the hotel industry as pointed out by the respondents in the survey.** The respondents pointed out that written Communication is essential in modern organizations, which provides clarity to the receiver on communication of details to avoid misunderstanding, promotes business relationships

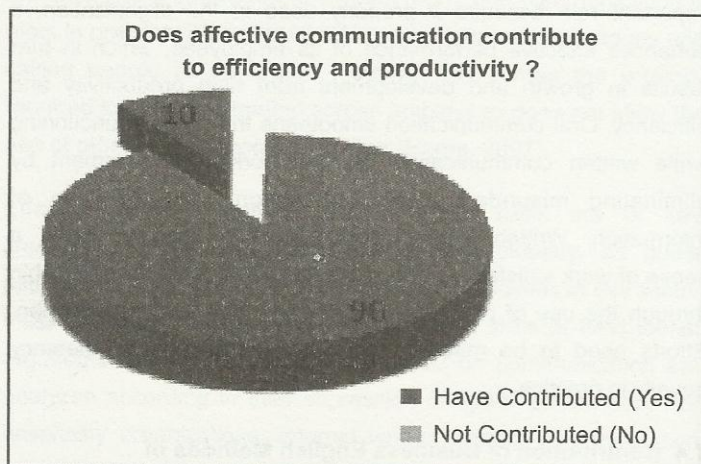
among the hotels and serves as reference and record purposes, such as Memo, Email, Policy, and Posters.

Oral communication was stated as an aspect used on a constant basis in all departments, among colleagues, between leaders and team members, from greetings, briefings, giving instructions, providing feedback up to down and down to up, dialogue sessions and many more. They stated that most of the guests visiting the hotels communicated mainly in English language, an aspect that all the hotels in the industry have adopted as it aids in employee promotion and appraisal by the Hotel management. This was also pointed out that the trend is on rise because of the provision of online services in hotels.

In general, communication forms the backbone of the hotel industry; it enhances the growth of employees and also plays a role in maintaining the image of the hotel in the industry.

3.3 How do they contribute to organizational efficiency and productivity?

Figure 1: Efficiency and Productivity



The respondents provided a positive feedback on the role played by the Business English Communication methods on the aspects of efficiency and productivity in the Hotel Industry. Ninety percent (90%) of the respondents reported that effective communication methods within their respective organizations, over the years have contributed to organizational efficiency in various ways. According to the respondents in the survey, coordination of all the departments in the hotel industry on time allows for optimum utilization of the available manpower in the industry. The Business

English Communication methods creates an avenue for optimization of hotel's revenue and productivity where the staff work towards avoidance of any wastes and utilize all the available resources. The respondents recommended that the customers/guest feedback after visiting the hotel is highly valued and aids in improving the hotel standards. They also pointed out that communication of the staff is one aspect in sales that brings more guests to the hotel as this increases the awareness of the services available in the industry.

3.4 What problems do organizations face when using these methods?

One problem reported by the respondents was lack of sufficient English language knowledge among many employees. Given the fact that hotel industry is actually diverse in nature, in most cases employees are of different nationalities. Some employees in particular those who come from non-English speaking countries may not have sufficient knowledge of the standardized phrases or the hotel jargon.

The second problem reported by the respondents was lack of proper communication skills, which makes it difficult for employees to convey ideas and messages accurately and properly in English language. Many respondents reported that written communication requires good English skills, which some employees may not possess. As a result of this many of the employees find it difficult to effectively communicate or pass a message effectively in written English. Moreover, lack of proper written English skills was reported by top human resource managers to cause information gap, which in turn breaks down the process of communication.

The third problem associated with Business English methods of Communication reported by many of the respondents was the problem of varied perceptions of the meaning of English words. An example of an English word reported by one of the respondents was the word "clean" which in its use doesn't have level of cleanliness and it varies in employees' perception.

3.5 In your own opinion do you consider employee English competency skills as an important aspect of communication in hotels?

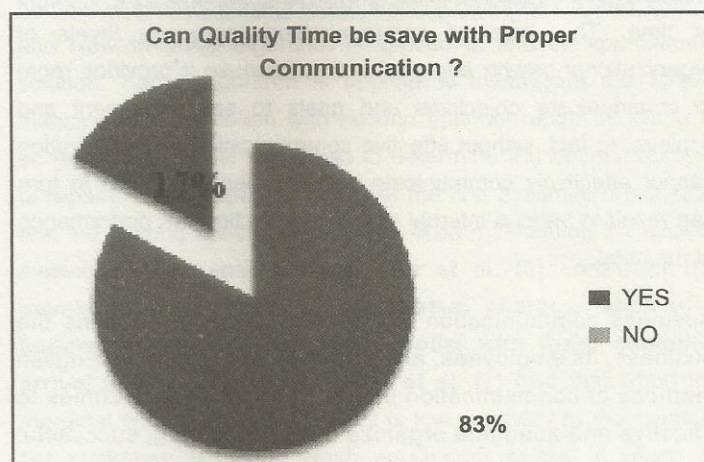
Employee English Competency skills are vital to the performance of the Hotel industry as shown by the survey conducted in the

Dubai hotel industry that has undergone globalization in the last two decades. Respondents stated that communication is a crucial factor that has influenced the establishment of relationships between different levels in the Dubai organization market and also serves as the main avenue of distributing information in all components of the economy. The revelation of any possible problems and issues is facilitated by proper communication skills among the employees of the Hotel industry. English Communication competency helps in revealing possible problems and also ensures that tasks are made smoother thereby creating quality services and products to offer to their customers. It also ensures that all the hotel's tasks are managed smoothly thereby creating quality services and products for offer to their customers in the hotel industry.

The respondent agreed that English is Lingua franca, so its role is vital in hotel industry in Dubai also. The respondents affirmed that the employee English competency skills play an important role in the customer service in the hotel industry. The personnel include the bartenders, hosts and waiting persons who interact daily with the guests visiting the hotel. They are part of the hotel staff that come in touch with the customers directly, and hence need to be efficient English communication. The staffs' competency begins the moment a guest arrives and is welcomed into the hotel. The guest's first impression which is going to last with him should be positive from every angle.

3.6 Can quality time can be saved, if improper communication can be avoided

Figure 2: Time Savings with English



Time is a key market determiner in the global economy as every industry works towards the maximization of the available time. From the survey conducted in the Dubai's hotel industry, the respondents agreed with this concept as 83% supported quality time as the key to proper communication while only 17% were not in support. The communication channel is the key to success in the business world today. If the channel is not fully implemented, it will lead to failure of the whole communication system which in turn will give negative result in the industry. The upward and downward communication channels are important in the process of ensuring quality time among the employees and management. Currently, the world is on a competitive nature in the hotel industry, thus need for effectiveness in the communication between the employees and customers in the hotel industry. Quality time management in the communication process is the key aspect that necessitates all the activities in the industry.

3.7. Knowledge of proper written language skills improves the efficiency of your organization

Conclusion

Globalization and changing trends in information technology have largely contributed to the communication in hotel industry as well. As Dubai is one of the fastest growing trading countries in the world, hotel industry in Dubai has become the focal point and hence increased its competitive nature. The question of organizational growth and excellence has further brought question of effective communication in its ambit. The research survey revealed that effective use of proper methods of communication results in overall performance, growth and success over a period of time. This type of communication increases levels of organizational growth and profitability, because it provides room to communicate objectives and goals to set, implement and achieve. In fact, without effective communication an organization cannot effectively communicate with its clientele, which in turn can result to various internal disorders affecting the performance of the hotel.

Business communication is the sole factor, which joins the business, its employees, and stakeholders. Business English methods of communication play a vital role when it comes to effective and adequate organizational structuring, successful

achievement of organizational activities and pursuance of organizational goals and objectives. High performing hotels in Dubai which were interviewed during the research study reported that effective communication results in high productivity and profitability because employees tend to know what it required of them at what time without necessarily being supervised.

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Design Of Service System For Insurance Business Facing Customer Impatience Using Queuing Theory

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Bhupender Kumar Som

Abstract

Insurance sector is crowded with a number of insurance players. Based on the quality of service and expected returns, customers may be attracted towards other service providers. As a result the customers may discontinue their policies with a particular firm or do not opt to join the firm at all. This behavior of customers is quite harmful for the growth and sustainability of any insurance firm. Firms employ a number of strategies to retain the impatient (renege) customers and to stop balking (customers not joining the firm at all due to some reasons) for sustaining their business. In this paper, a stochastic queuing model is proposed to study the retention of renege customers along with customer balking, when any customer retention mechanism is employed. It is envisaged that if the firms employ some customer retention mechanism, then there are chances that a certain proportion of renege customers may be retained. The cost-profit analysis of the model is also carried out. The optimum service rate of the system is obtained using the classical optimization techniques. The sensitivity in the optimum service rate is studied by varying the mean arrival rate and the mean renege rate. The effect of the change in mean renege rate and the change in mean arrival rate on the total expected cost, total expected revenue, and total expected profit are also studied.

Keywords : Optimum service rate, Insurance Business, Renege, Balking, Total Expected Cost.

Introduction

Due to high competition the retention of impatient customers has become a key issue for any business. Insurance business is not exceptional as well. In thrust of maximizing profit companies try to reach more and more customers. Impatient customers may also make some potential customer balk (customers leave without joining the business (queue)) away by communicating their level of dissatisfaction. So companies facing customer impatience are impacted with another blow in form of customer balking resulting in loss of more customers. To minimize above mentioned customer loss, high level of customer service is required which incurs high cost of service. One way to increase profit is by minimizing the cost. Thus, there is a need to enforce optimum service rate so that the cost of providing service can be minimized, the customers are served more satisfactorily, and the total profit can be increased.

Cochran et al. [10] explores the concept of customer impatience

and the loss due to this the business faces. Wu et al. [12] focus on an $M/M/s$ queue with multiple vacations such that the server works with different service rates rather than no service during vacation period. They generalize an $M/M/1$ queue with working vacations. A cost function is formulated to determine the optimal number of servers subject to the stability conditions. Direct search and Newton-Quasi algorithm is applied to find an approximate solution. Same algorithm is applied to investigate the $M/M/R$ machine repair problem with second optional repair by Wang et al. [9]. A cost model is derived to determine the optimal number of repairmen, the optimal values of the first essential repair rate, and the second optional repair rate while maintaining the system availability at a specified level. Ke et al. [8] construct the membership functions of the system characteristics of a heterogeneous-server queuing model with fuzzy customer arrival and service rates. Ching et al. [7] find that when the marginal cost of service capacity is low relatively to the revenue per customer, a unique Nash equilibrium exists, in which all

servers choose the same service capacity and the expected waiting times are finite. Tadj et al. [11] use a vacation queuing model and develop a set of quantitative performance measures for a two-parameter time allocation policy. Based on the renewal cycle analysis, they derive an average cost expression and propose a search algorithm to find the optimal time allocation policy that minimizes the average cost. Yue et al. [6] study a two-server Markovian network system with balking and a Bernoulli schedule under a single vacation policy, where servers have different service rates. Yue et al. further in [4] present analysis for an M/M/R/N queuing system with balking, reneging and server breakdowns. A cost model is developed to determine the optimum number of servers while the system availability is maintained at a certain level.

Wang et al. in [1] develop a cost model for an M/M/R queuing system with finite capacity balking, reneging and server breakdowns. Sensitivity analysis of the model along with numerical results is also performed. Pan [5] studies an M/M/1/N queuing model with variable input rates and points out the appropriate service speeds for the business. Yue et al. [3] present an analysis for an M/M/c/N queuing system with balking, reneging and synchronous vacations of partial servers together formulate a cost model to determine the optimal number of servers on vacation. They perform sensitivity analysis through numerical experiments. Literature survey shows the importance of cost modeling and its solution in way to optimize profit. Borst et al. [2] apply queuing theory for designing the call centers. Recently, Kumar and Sharma [13] study a single server, finite capacity Markovian queuing model with reneging, balking and retention of reneged customers. They derive its steady-state solution.

Description of the Model

In this paper, we propose a single server, finite capacity Markovian queuing model with reneging, balking, and retention of reneged customers for any insurance firm facing the problem of customer impatience (reneging and balking) and implementing various customer retention strategies as studied by Kumar and Sharma [13]. The customers arrive in the system according to a Poisson process with mean rate λ . An arrival to the system represents the sale of one insurance policy. There is a single server and the customers are served in order of their arrival. The service time distribution is exponential with parameter μ . Here,

the service of a customer represents the claim processing at the maturity of the policy. The insured customers at any stage before maturity may get impatient due to various reasons like dissatisfaction of service, immediate requirement of money, better opportunities with the other insurers etc. and may withdraw their policies. This phenomenon is analogous to reneging in case of queuing theory. The customers get impatient (reneged) following exponential distribution with parameter ξ . As the customer impatience has highly negative impact on the business of the firms, they employ different customer retention strategies to retain their customers. It is envisaged that if the firms employ certain customer retention strategies, then there are chances that a certain proportion of impatient customers may be retained. Thus, an impatient customer may be retained in the system with some probability q (say) and he may not be convinced to stay in the system for his complete service with probability $1 - q (= p)$. The customer retention strategies in insurance business can be the convincing of customers by phone calls, better and reliable service, providing better returns, discounts on premium etc. The arriving customers may balk with probability n/N , where n is the number in system and N is the maximum number allowed in the system (i.e. some customer may not decide to purchase the policy due to dissatisfaction about company policies).

The steady-state probabilities of the model are given by :

$$P_n = \prod_{k=1}^n \frac{N - (k - 1)}{N} \frac{\lambda}{\mu + (k - 1)\xi p} P_0; 1 \leq n \leq N - 1$$

Also for $n=N$, we get

$$P_N = \prod_{k=1}^N \frac{N - (k - 1)}{N} \frac{\lambda}{\mu + (k - 1)\xi p} P_0; n = N$$

Using the normalization condition,

$$P_0 = \frac{1}{\left(1 + \sum_{n=1}^N \prod_{k=1}^n \frac{N - (k - 1)}{N} \frac{1}{\mu + (k - 1)\xi p} \right)}$$

The expected system size is:

$$L_s = \sum_{n=1}^N n \prod_{k=1}^n \frac{N - (k - 1)}{N} \frac{\lambda}{\mu + (k - 1)\xi p} P_0$$

Cost Model

In this section, we present the cost-model and perform optimization.

Notations :

- $1/\lambda$ = mean inter-arrival time.
- $1/\mu$ = mean service time.
- P = probability that the system is full
- L = expected number of customers in the system
- R = average rate of reneing
- R = average rate of retention
- R = average rate of balking
- C = cost per service per unit time
- C = holding cost per unit per unit time
- C = cost associate to each lost unit per unit time
- C = cost associated to each renege unit per unit time
- C = cost of retaining a renege customer per unit time
- C = cost associated to each balked customer per unit time
- R = revenue by providing service to each customer per unit time
- TEC = total expected cost of the system
- TER = total expected revenue of the system
- TEP = total expected profit of the system

We define the total expected cost (TEC) of the system as :

$$TEC = C_{su} + C_h L_s + C_l P_n + C_r R_r + C_b R_b + C_{cr} C_r +$$

Where the average reneing rate, R_r , the average retention rate, R_r and the average balking rate,

Let R be the revenue earned for providing service to each customer per unit time, then RL_s is the total earned revenue by providing service to average number of customers in the system. $RL P_n$, RR_r and RR_b are the losses in the revenue of the system due to number of lost customers per unit time, due to reneing of customers and due to balking of customers per unit time respectively. Hence, total expected revenue (TER) of the system is given by:

Now, total expected profit (TEP) of the system is defined as:

$$TEP = TER - TEC$$

Thus, we have the TEC, TER and TEP functions in terms of various parameters involved. The cost – profit analysis of the model is performed numerically by using these functions and the results are discussed accordingly. The optimization of the model is also carried out in order to obtain the optimal service rate and to obtain the optimum values of TEC, TER and TEP. The impact of various customer retention strategies on the total optimal profit is also analyzed. It becomes quiet intractable to proceed analytically for optimum value of service rate (μ^*) at which the TEC is minimum. Therefore, we have used MATLAB software to get the optimum values using a computational algorithm.

Computational algorithm:

- Step 1: Define variables
- Step 2: Write the formula of function TEC in terms of
- Step 3: Obtain critical values of μ
- Step 4: Find the value of μ at which TEC is minimum (let it be μ^*)
- Step 5: Compute the values of TEC, TER and TEP at μ^*

Table: 1.1

Variation in L_s w. r. t. Mean reneing rate (ρ) at $q=0$ and $q=0.6$

We take $\lambda = 2, \mu = 3, N = 4$

ρ	L_s at $q = 0$	L_s at $q = 0.6$
0.05	0.8062	0.8128
0.06	0.8041	0.8119
0.07	0.8020	0.8110
0.08	0.7999	0.8102
0.09	0.7978	0.8093
0.1	0.7958	0.8084
0.11	0.7937	0.8075
0.12	0.7918	0.8067
0.13	0.7898	0.8058
0.14	0.7879	0.8049
0.15	0.7859	0.8041

From table 1.1 it is observed that the system size is remains lesser at $q=0$, as there is no retention strategy is followed for renege customers as a result more and more customers move out of the system with increasing rate of renege and that results in a reduction in system size. On the other hand when some retention strategy is followed to retain the renege customers in

terms of premium discounts, better service assurance, etc the system size increases comparatively. System size reduces with increasing rate of renege though. But it is observed that the firm employing some customer retention strategy for the renege customers increases their system size that ultimately results in more customers in the system which leads to more profit.

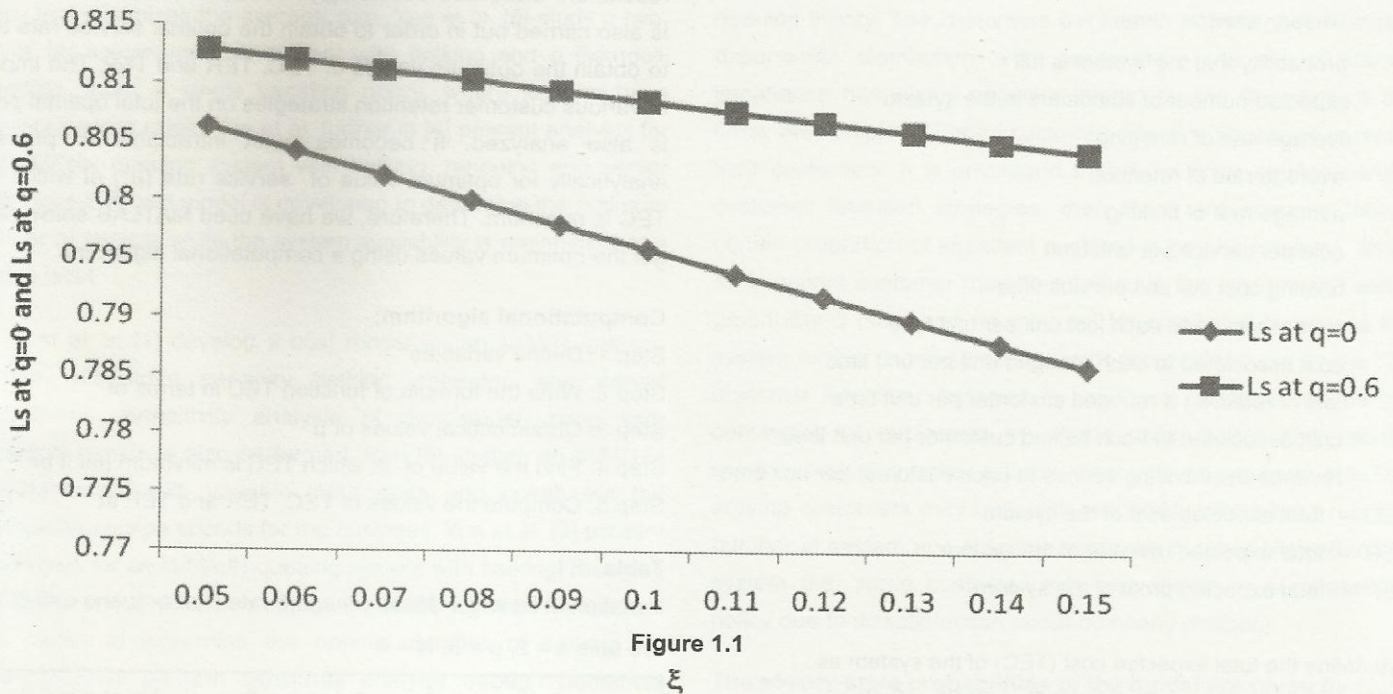


Figure 1.1 gives an insight to table 1.1 and provides a comparative analysis between the system sizes at $q=0$ (when no renege customer is retained) and at $q=0.6$ (When 60% of the

customers are retained by employing some customer retention strategy) with changing rate of renege.

Table: 1.2

Variation in TEC, TER and TEP with the change in average renege rate, when service rate is optimized

We take $\lambda = 2, q=0.6, N = 4, C_b = 7, C_s = 4, C_h = 3, C_L = 12, C_r = 8, C_R = 45,$ and $R=100.$

ξ	μ^*	TER	TEC	TEP
0.05	1.9045	170.9306	76.7600	94.1706
0.06	1.9030	170.1394	76.7772	93.3622
0.07	1.9014	169.3586	76.7943	92.5643
0.08	1.8999	168.5751	76.8114	91.7637
0.09	1.8984	167.7953	76.8284	90.9669
0.1	1.8969	167.0193	76.8454	90.1739
0.11	1.8954	167.0820	76.8623	90.2197
0.12	1.8939	165.4784	76.8792	88.5992
0.13	1.8924	164.7113	76.8960	87.8153
0.14	1.8909	163.9520	76.9128	87.0392
0.15	1.8895	163.1881	76.9295	86.2586

In table 1.2, optimum service rate is derived for every value of renegeing rate, as varying rate of renegeing affects the system size, hence constant rate of service is unexpected and unprofitable. Because of complexity of manual classical optimization technique a MATLAB program is constructed for classical optimization technique as per the algorithm mentioned and service rate is

optimized for varying mean rate of renegeing. The profit thus obtained is maximized. The profit obtained decreases from Rs 94.1706 to 86.2586; this is due to the fact that increasing rate of renegeing reduces the system size and leaves fewer customers in the system.

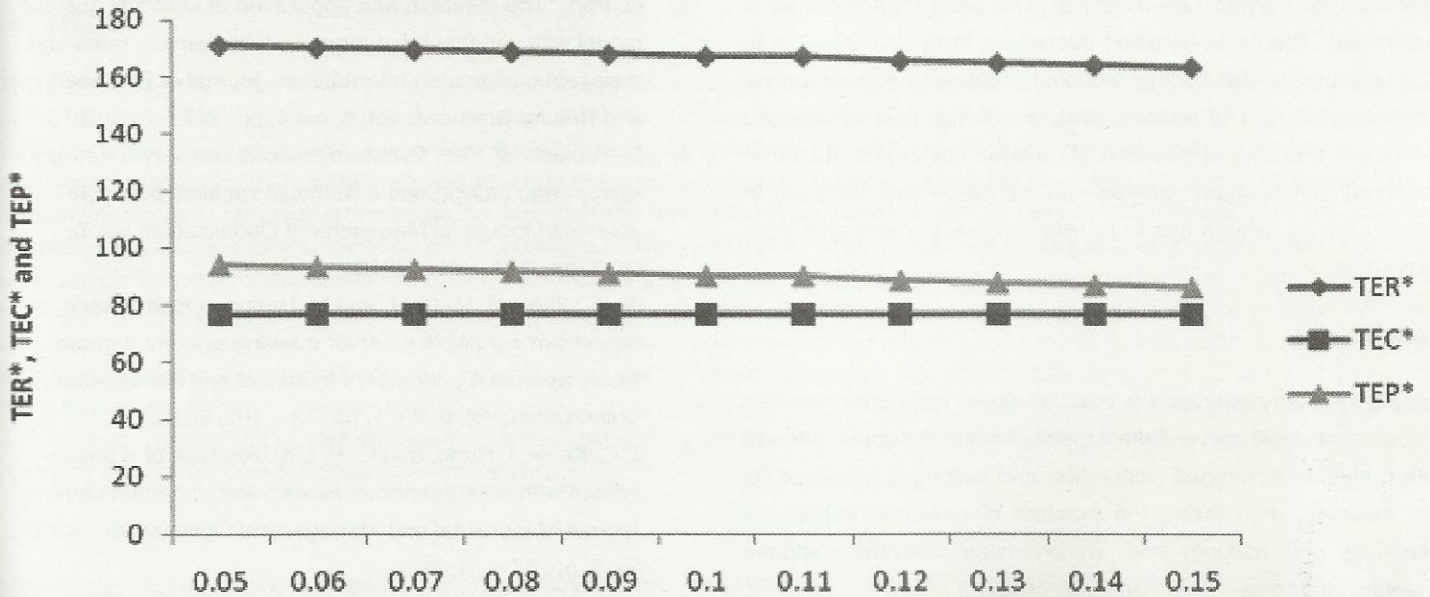


Figure 1.2

ξ

Figure 1.2 gives provides a bird's eye view to table 1.2's analysis. It shows the movement of total expected return, total expected cost and total expected profit. Total expected cost increases with

increase in renegeing rate due to the fact that retention strategy applied to retain the renegeed customers involve some cost mentioned by C_R .

Table: 1.3

Variation in TEC, TER and TEP with the change in mean arrival rate, when service rate is optimized

We take $\xi = 0.1$, $q=0.6$, $N = 4$, $C_b = 7$, $C_s = 4$, $C_n=3$, $C_L =12$, $C_r=8$, $C_R =45$ and $R=100$.

λ	μ^*	TER	TEC	TEP
1.5	1.6333	194.5385	65.1161	129.4224
1.6	1.6893	190.7318	67.5639	123.1679
1.7	1.7434	186.0426	69.9558	116.0868
1.8	1.7960	180.4949	72.2971	108.1978
1.9	1.8471	174.1431	74.5923	99.5508
2	1.8969	167.0193	76.8454	90.1739
2.1	1.9454	159.1656	79.0598	80.1058
2.2	1.9929	150.6025	81.2387	69.3638
2.3	2.0392	141.3748	83.3848	57.9900
2.4	2.0847	131.4959	85.5006	45.9953
2.5	2.1292	121.0026	87.5881	33.4145

In table 1.3 optimum service rate is derived for varying values of arrival rate, as varying rate of arrival affects the system size, hence constant rate of service is unexpected and unprofitable. Because of complexity of manual classical optimization technique a MATLAB program is constructed for classical optimization technique as per the algorithm mentioned and service rate is optimized for varying rate of arrival. The profit thus obtained is maximized. The profit obtained decreases from Rs 129.4224 to 33.4145; this is due to the fact that increasing rate of arrival increases the cost of service, cost of holding, cost of renege customers and cost of retention of renege customers. It can be observed that optimum service rate increases with increase in arrival rate, as system has to provide service to more and more customers.

Conclusions

A queuing theory approach is used to model insurance business problems. A single server finite capacity Markovian queuing model with retention of renege customers, and balking is proposed for any insurance firm facing the problem of customer impatience (renege and balking) and implementing different customer retention strategies.

The cost – profit analysis of the model is performed and the impact of varying mean renege rate and mean arrival rate on the total expected profit of the system is studied.

The optimization of the model is performed in order to minimize the total expected cost of the system with respect to the service rate. The analysis carried out in this paper is very useful to any insurance firm.

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Best Practices and Strategies for Collaboration Between Industry and Academia

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Ankur Ratwaya

Abstract

The collaboration between industry and the academic world has always been an important but complex topic. Due to the rapid evolution of the business environment and the vast transformations throughout the academic realm, the subject is now even "hotter" than it has been. It's a mutual approach, the companies offer business insights and the students contribute proven methodology and expertise. It is a win-win situation for both parties. However, since the universities and industrial companies have different business models, some investment needs to be made to converge the two positions before the mutual benefits can be reaped. Universities focus on educating people and in creating new knowledge and excelling in existing know-how, while companies concentrate on mastering the challenges of a competitive environment and are striving for market success. Research's engagement with industry must start at the project functional review stage to enable industry to understand what core objectives of the project are. This single decision will save considerable money and time. Those industry partners can then go away and find relevant solutions to solve functional problems. It will also begin valuable work-team interaction. Research needs to attract appropriate development funds to engage industry early. This early investment will save project expense and deliver a more cost effective instrument. Both industry and research need to provide and resource appropriate project management personnel and ensure that technical staff are not distracted by this function. Industry and research must make time for cross-team interaction

Keywords : Supply Chain management (GSCM); Government; standards

Introduction

The collaboration between industry and the academic world has always been an important but complex topic. Due to the rapid evolution of the business environment and the vast transformations throughout the academic realm, the subject is now even "hotter" than it has been. It's a mutual approach, the companies offer business insights and the students contribute proven methodology and expertise. It is a win-win situation for both parties.

However, since the universities and industrial companies have different business models, some investment needs to be made to converge the two positions before the mutual benefits can be reaped. Universities focus on educating people and in creating new knowledge and excelling in existing know-how, while companies concentrate on mastering the challenges of a competitive environment and are striving for market success. Obviously the core interest of both differs. When they collaborate,

each party has certain expectations of the other side the companies expect innovative and state-of-the-art lectures to secure high quality education, valuable knowledge and ground-breaking methodologies, while the universities expect their students to be given business experience e.g. through internships and opportunities to put their skills into practice. The academics also expect to be given the opportunity to transfer theoretical ideas into practical projects and to implement research in the real world. Both parties have fundamental points of interest and this is where a win-win situation is achieved for both of them. With students being well educated in new methodologies and the corporate experts transferring these innovations into practical projects which involve the students, we will soon be able to see how the collaboration can bring about mutual advantages.

Companies which do not have a close relationship to the academic community are expected to advance slower. They miss out on early access to the latest research results and

methodologies and then need more time to put these methods into practice. By being out of touch with a university, its students and young professionals, they become less attractive as prospective employers and often find it more challenging to recruit graduates and commit them for their first 2-3 professional years. Effective collaboration between academics and companies is critical for management research. It can inspire research topics that are relevant to business and encourage implementation of research findings. However, conducting collaborative research is not always easy

Challenges to Collaboration and Solutions for Solving Them

The collaboration faces many challenges :-

Different incentives

Academics seek data for publication and funding to support their research. Corporate motives can vary by company and by person and include philanthropy, brand recognition, access to new technology or information, student recruiting and relationship building with a specific researcher. Collaborators should clarify their motives early and ensure they understand what their potential partner is seeking from the project. Failure to align these interests can cause the relationship to fail or even prevent the collaboration from launching. For example, a manager seeking brand recognition will not likely be motivated by promises of access to the latest technology. Pitching a benefit that doesn't align with the corporation's interests could dissuade them from engaging.

Different ideas of deliverables

Companies are accustomed to dealing with consultants, hired to solve a company-specific problem and committed to providing a pre-determined product. These products are typically concise, highly visual and can be quickly applied to decision-making. When working with consultants, companies also own all intellectual property arising from the work.

Written agreements

Reaching consensus on written agreements, including contracts and MOUs, takes time and compromise. Crafting any agreement

should start with a solid understanding of all parties' concerns and expectations. After all, an MOU is a memorandum of *understanding*. Legal departments should also be consulted early on. This will allow identification and mitigation of potential legal concerns. When developing MOUs and contracts, less is more. Crafting broad, high-level agreements can provide room for flexibility as projects evolve, reducing the need for changes or new agreements. This saves time and frustration for all involved.

Perceptions of pace

The research team and participating companies can perceive project pacing very differently. "In the early stages, researchers really want to get rolling with a project, but it takes times time for companies to move things up through the appropriate channels. Partners should explain how processes work in their organization and give expected timelines for each part of the project.

Risk associated with a single corporate contact

Allowing one person to be a researcher's only contact within a company exposes a project to risk. If the contact leaves, the researcher could lose the support of the institution and the collaboration may end. At a minimum, the researcher will have to invest considerable time selling the project to someone new. If the contact's motives for collaborating were individual and not organizational, it may be very difficult to move forward.

Building relationships takes time

Developing and managing research partnerships takes time and skills that aren't always easy to find. To progress from reaching out to companies, to getting them excited about the project, to completing written agreements, can take many months.

Keys for the Collaboration Success

Define the project's strategic context as part of the selection process.

Use the company research portfolio to determine collaboration opportunities. Define specific collaboration outputs that can provide value to the company. Identify internal users of this output at the working level; executive champions are not a substitute for this requirement.

Select boundary-spanning project managers with three key attributes

In-depth knowledge of the technology needs in the field is required. The inclination to network across functional and organizational boundaries is necessary. The ability to make connections between research and opportunities for product applications.

Share with the university team the vision of how the collaboration can help the company

Select researchers who will understand company practices and technology goals. Ensure that the university team appreciates the project's strategic context.

Invest in long-term relationships

Plan multiyear collaboration time frames. Cultivate relationships with target university researchers, even if research is not directly supported.

Establish strong communication linkage with the university team

Conduct face-to-face meetings on a regular basis. Develop an overall communication routine to supplement the meetings. Encourage extended personnel exchange, both company to university and university to company.

Build broad awareness of the project within the company

Promote university team interactions with different functional areas within the company. Promote feedback to the university team on project alignment with company needs.

Support the work internally both during the contract and after, until the research can be exploited.

Provide appropriate internal support for technical and management oversight. Include accountability for company uptake of research results as part of the project manager role.

Best Practices for Industry-University Collaboration

The best practices for the industry academia relationship are :-

Define the project's strategic context as part of the selection process

Industry-university collaborations must be aligned with the company's research and development strategy and address a tangible need of the company. If not, there is high risk of investing in projects that have little or no impact. One senior technology manager stated: "Ensure that there is a tight link between the current commercial strategy and the research collaboration. The point is that there should be a vision within the company about what the university project will provide to the company.

University research that lacks *both* a link to the company's R&D portfolio *and* a company unit that cares about the result is unlikely to be given enough attention to prove useful.

Select boundary-spanning project managers

In every organization, there are certain individuals who naturally engage in networking activities, maintaining relationships that cross organizational lines. These boundary spanners are the main conduits by which knowledge is acquired from external sources and disseminated inside the organization, and they play an essential role in how any organization benefits from and adapts to its environment. Companies dependent on new technology rely on a particular type of boundary spanner the technical boundary spanner to capture and use this technology successfully. Effective technical boundary spanners, whether as a result of personality or training, recognize their responsibility to facilitate knowledge exchange with both the university research group and within their company. They are key to turning collaboration research outcomes into company impacts.

Invest in long-term relationships

Industry and academia do research on markedly different time frames. Industry is driven by economic and product cycles, while academic research project duration depends largely on the time required for a graduate degree program (a year and a half to two years for a master's degree, three to four years for a doctorate). Both parties thus need to be upfront, and realistic, about their time expectations. The creation of multiyear collaboration programs addresses this mismatch and improves the chance of a successful research outcome.

Establish strong communication linkage with the university team

It is beneficial to have the university researchers visit the company and interact with company personnel. The more often these visits occur, the better the outcome and impact of the project. Such visits can facilitate the creation of strong personal relationships. Personal interactions are also crucial in the transmission of unwritten tacit knowledge such as details of design or development practices. Regular meetings at the company thus foster the success of the collaboration.

Build broad awareness of the project within the company

Contact between university researchers and individuals in the company over and above the project manager increased the research's impact for the company. University researchers who were introduced to professionals from different functional areas (for example, manufacturing, product development or sales) were able to share methods, lessons or discoveries on a broad front. As a result of this wider awareness, the university team received useful suggestions from other company perspectives than that of the project manager's group.

Support the work internally both during the contract and after, until the research can be exploited

Successful management of industry-university collaborations implies a wider view than deliverables and contract fulfillment, because creating and sustaining a peer-to-peer relationship is central to success. Strong personal relationships serve as a catalyst for increasing knowledge flows. If these exist, people are more willing to invest time and effort in communicating knowledge to others. To incentivize and enable such investment, company project managers need to provide appropriate internal support for their work in the collaboration. The amounts quoted vary, but one general rule mentioned was that for every dollar spent outside, the company should devote a dollar inside.

Factors Affecting the Collaboration's Impact

Several factors widely thought to be important to industry-university collaborations in fact had little effect on the projects' business impact.

Presence of an executive "champion"

Although a powerful ally in the executive suite can help obtain

support for a project, we did not find a correlation between the existence of such a champion and project impact. To deliver value, the key is whether the project addresses a real need, as perceived by working engineers in the company.

Geographic proximity

Companies scouted for collaborators worldwide and were able to bridge geographic distance through visits, personnel exchanges and student internships. The important factor is not proximity but personal interaction between the academic research team and the company.

Overall project cost

The time frame of the project, not the amount of funding, is important.

Type of research basic, applied or advanced development

There was no statistically significant difference in terms of impact between projects with different missions. The most important is that the projects address a tangible need for the company.

Location of project manager

There is no evidence that the location of the project manager, whether at a central laboratory or a business unit, affects project impact.

Academic-industry Types

The academic institutions and corporations have forged a variety of partnerships, the most popular of which include :-

- a. **Classroom and curricular activities** such as corporate-sponsored design studios, corporate supported capstone projects, as well as courses, lectures and panel discussions taught by visiting professionals.
- b. **Short-term intensive design workshops** such as week-long design clinics or multiweek summer workshops that are taught by design professionals in either campus or professional design studio settings with a focus on real-world design issues.
- c. **Design competitions** with a focus on key challenges in design

practice, where project topics and awards are sponsored by a professional design organization.

- d. **Student and faculty on-site opportunities** including tours of design studios and manufacturing facilities.
- e. **Employment opportunities** including summer internships, more intensive co-op positions and other work-study opportunities for students, faculty and alumni;
- f. **Corporate-sponsored research projects** where professors and students, who have more time and freedom to research, can explore topics that are applicable to the sponsor's core competency.
- g. **Professional conferences and community organizations** designed to create knowledge exchange and networking between practitioners, educators and/or students.
- h. **Presenting and publishing new methods and research** at conferences or in textbooks, journals and other relevant publications.
- i. **Corporate grants and philanthropic donations**, which enable universities to direct funds where they see fit and which provide companies with strong public relations stories.
- j. **Advisory boards** that enable academic institutions to receive direction on program and curricula development from industry leaders and/or practicing alumni; and also in the reverse, advisory boards where academic leaders offer visionary input on future research and development opportunities.
- k. **Liaison offices**, which ensure that connections between corporations and educators are created, maintained and grown.

Guidelines for the Academia-Industry Interaction

The guidelines have to be set for the academic, industry and the academic-industry.

For the Academic Community

Bring the real world into the classroom or take the classroom into the real world.

Theoretical knowledge like design philosophy, design thinking,

methodological approaches and social and ecological responsibility are undeniably core to design education. But, the practice of design in real-world contexts rife with demanding clients, ambiguity, complexity and constraints is equally important. Incorporate real projects with real clients into the curriculum. It is within these settings that students hone their professional skills of observation, organization, prioritization, business justification, and communication. It is here where designers master design thinking, making and doing.

Require international studies

Given the inevitable forces of globalization, worldwide population growth and emerging markets, designers must have international experience.

Explore new research opportunities

Much of the research in design is centered on new user observation/testing methods, new design processes and new product or service experiences. Given the impending shifts in the workforce, there is great opportunity to research new approaches to creative leadership and management and new methodologies and tools for enabling effective geographically distributed collaborative design activities.

Influence other academic communities

While interdepartmental research is an obvious answer, broader and deeper opportunities should be sought. In most academic environments, each department has its own building, hallway, lab or space in which to operate.

For The Industry

Offer more of the work opportunities that students and professors seek

While educators and students are encouraged, even expected, to engage with corporations, none of these efforts can be successful if the internships, apprenticeships, industry sabbaticals and research grants do not exist.

Build deeper relationships with students

Beyond classroom instruction, there are a variety of opportunities to engage students more deeply. Build a presence on campus

through activities such as information sessions, portfolio reviews, interviewing and mentorship.

For Academic & Industry Together

Expand the collaboration

While academic and industry alone can make strides, there are certain initiatives which would benefit greatly from the engagement of professional associations, government or nonprofit collaborators.

Halt the impending identity crisis

Design educators, practitioners and professional associations must work together to clarify the role of design through a shared definition of the various disciplines, a standardized body of knowledge for each specific design discipline, a common articulation of how these design disciplines as well other work partners contribute to the holistic user experience, and possibly certification processes.

Expand the diversity of the design community

Design is very much a multidisciplinary and multicultural field. Within any given academic institution or professional practice, the designers have backgrounds in fields ranging from engineering to the human sciences and they represent cultural heritages and educational philosophies around the world. However, diversity gaps still exist within the design community.

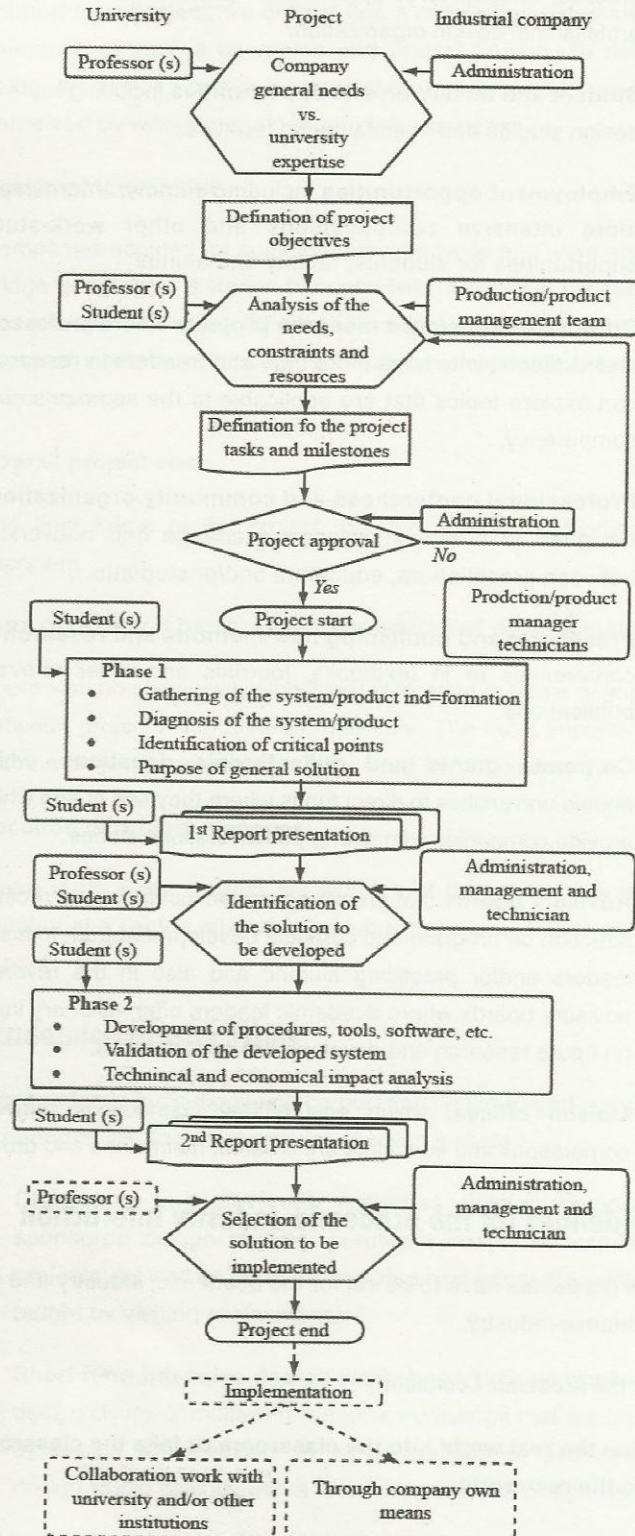
Modify academic rewards structures to encourage collaboration

While interdisciplinary collaboration is touted as critical within the design community, it is not always rewarded in academic settings. While not every design program is housed in a standard university system, those that are face the challenges of tenure ship and institutional politics.

Model for the Industry-Academia Collaboration

We would like to propose a model for the Industry-academia collaboration.

Fig:-Model Schematization



The following described model comprises three phases: preparation, diagnosis and solutions development. In the preparation phase the university's member must establish contact with the industrial company top management. The objectives of the project should be collaboratively defined after a wide-ranging brainstorming concerning the company general requirements and professor's group expertises. It is critical for the project success to involve the company top management at this phase, in order to assure both the employees active involvement during the following phases and the matching between the project results and company expectations. The next step is the definition of the project tasks and intermediate milestones. The professor and the student at the university side, and the head of product/production sector at the company side, should be involved in this step. The objectives of the defined tasks and the methodologies to apply must be very clear, in order to simplify the communication and to avoid higher levels of expectation than the ones withdrawal at the project end. It should not be forgotten that the project content must not only aim the reduction or the elimination of the company organizational and/or technical problems. It must allow the application of universal scientific- and/or technical-based methods and tools and must promote their incorporation as knowledge in the company. After last step approval by both sides the project can start. The diagnosis phase begins with the information gathering from the manufacturing system, work labor, product and process characteristics, etc. The students will lead this phase by collecting data and asking for inputs from the production/product responsible and from the technicians directly or indirectly involved.

Depending on the project type, these data can be qualitative and/or quantitative. Preferentially the information collected from the technicians and operators should be done at the shop-floor and without the presence of the responsible. This task of the diagnosis phase must be compact: it should run for about two to three weeks, with at least four days-a-week presence of the students at the company to guarantee their natural permanence in the manufacturing system environment. The success of this task depends on the quality of the information gathered. After collecting the information, the students can continue the diagnosis through the identification of weaknesses, strengths, limitations, critical points, etc. and through the purposing of general solutions these two tasks should not be performed at

company premises. The outputs of this phase are a short and concise report and, most important, an oral presentation of the first phase results in a working meeting. The last phase comprises the detailed development of the solutions selected in the previous phase. Each solution must be described in detail and its technical and economical impact estimated and analyzed. So, in this phase are developed either procedures or tools, which must be validated with the available data. The presentation of the results of the solutions development phase is done using a procedure similar to the one used in phase 1. The impact of the developed proposals must be presented under more than one scenario to allow the estimation of the potential implementation benefits for the company in a simple but clear way. The aim is to provide the company with systematized, simple and technically and/or scientifically supported information to support the robustness of the decision-making process.

Conclusion

Research's engagement with industry must start at the project functional review stage to enable industry to understand what core objectives of the project are. This single decision will save considerable money and time. Those industry partners can then go away and find relevant solutions to solve functional problems. It will also begin valuable work-team interaction. Research needs to attract appropriate development funds to engage industry early.

This early investment will save project expense and deliver a more cost effective instrument. Both industry and research need to provide and resource appropriate project management personnel and ensure that technical staff are not distracted by this function. Industry and research must make time for cross-team interaction. Tasks include: define the project requirements, explain methods of work and the work drivers, identify skills crossover and gaps, build a sense of team and open communication. Get to know your collaborator's work environment and day to day realities.

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An Empirical Study of Career Assessment Test

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Abstract

Unlike interview, psychometric tests are a standard and scientific method used to measure individuals' mental capabilities and behavioral style. Psychometric tests, as a new initiative, are designed and implemented to measure students' suitability for a role based on the required personality characteristics and aptitude (or cognitive abilities). They identify the extent to which candidates' personality and cognitive abilities match those required to perform the role.

These tests are designed to assess personal qualities, such as beliefs, values, and interests, as well as motivation or 'drive'. These are known as measures of typical performance which are usually administered with the questions that have no 'right' and 'wrong' answers. The answers reflect how the person taking the test would usually or typically feel, what they believe, or what they think about things.

Keywords : Assessment Test, Psychometric Test, Cognitive Abilities, Aptitude

Introduction

In today's highly competitive business world, it is extremely difficult to identify the right person for the right job. This evidently translates to the fact that the demands or rather the requirements of the job is complex and intriguing and above all in order to find the appropriate *fit* for the job it is extremely tedious to find the right person who can fit the role as appropriate to the job profile. Further, the complexities of the modern business world *demands* from the workforce to *suitably* adapt itself to meet the changing dynamics and scenario of the business rules.

Thus, the turbulence introduced by the global financial crises of the year 2008 has brought about or rather has forced to business units to reframe the game of the recruitment and selection process. Gone are the days when with the minimal interaction with the prospective candidate, he or she was selected without any qualms. But, today the scenario is completely different. The prospect is required to undergo several rounds of interactions in

terms of technical, HR, numerous rounds of GD and PI's and what not. All these tests or interactions are being conducted to determine the appropriate *fit* for the job so as to meet the changing scenarios and situations of the modern commercial world.

Worth mentioning is the fact that several assessment tools were contemplated and designed at different points of time so as to assess the candidate on several aspects by deploying mathematical models, graphs and equations and thereby assisting the recruiter in the selection process. Psychometric tests is one of the tools which gained wide acceptability in the current scenario.

Background / Literature Review

Based on the corporate experience of one of the authors, this paper covers the practical aspects of the psychometric tests as used in the industry. Thus, this paper covers more of the practical scenario with judicious blend of theoretical perspectives arising

out of scanning through several references from authentic resources.

The word **psychometric** comprises of two words, psycho and metric. The word psycho is concerned with the study of the behaviour of the human being with respect to the environment, his attitude, aptitude and several parameters which directly or indirectly contribute to his behaviour and thus the development of the personality. Metric means the measurement of these parameters. Thus, psychometric assessment tools are concerned with the measurement of the behavioural parameters of the individual through tools such as questionnaires, simulated situations and the like. Thus it is observed that when it comes to dealing with psychometric assessment tools, the following is necessarily followed

- Identification and defining the core parameters which are essential for the functioning of the business and thus the job profile for which the recruitment is being done.
- Once these parameters have been identified measurement parameters are defined to the degree and the level for which they are applicable to the job profile
- Once the above are in place, the prospective candidate is subjected to these psychometric tests.
- The results of the tests provide insight to the recruiter as to whether to select or reject or put on hold the prospective candidate

Objective of the study

The basic objective of the study was the assessment of career objectives of the candidate. This need arose from the following practical scenarios which the author faced during the corporate stint.

- It was observed that the candidate once recruited in the organization evinced discomfort after 15-20 days of joining. This was due to either their career aspirations were not met or the type of the challenge demonstrated by the job requirements were too challenging for them.
- In some of the cases, it was observed that there was a paradigm shift in the role that they were playing pertaining to the job profile.

- For example, a Btech/MBA person was asked to market the product even though his inclination was toward the technical side. It was later observed that the candidate was unsure with the career he had in mind i.e. Whether to go towards the MBA side or the technical side
- In some of the cases it was observed, that the candidate were not serious about the job and the profile they wanted to take as their career. For example, 5-6 candidates had opted for the position of project manager when they were capable of group manager meaning that they had downplayed their capabilities.

Organization of the questionnaire

This design of the questionnaire comprised of the amalgamation of several types of personality tests such as self-evaluation, word association, situational Judgment test, sentence completion tests and the like.

Structure of the questionnaire

During the design of the questionnaire a structured approach was followed. The questionnaire consisted of a battery of questions and was inclusive of close-ended questions related to the ease of the student responses in relating to rationality and the course of happening of things generally to open-ended questions of what upsets them. Each of the questions followed a logical approach which gradually led to the objective of the study of the paper.

Several inter related factors such as proficiency to work with teams, ambiguity among the team member, the contribution of the stress during and after the execution of team tasks, individual tasks, managerial tasks and the interactions with the client, the customers and the other stakeholders were determined. All these were included to gauge the qualities which a recruiter would like to determine before taking the decision as regards to selection of the prospective candidate.

Further, the questionnaire was included the parameters like

- The need, ability and desire to be
 - a) Aware with the latest happenings,
 - b) Connecting and interacting with people
 - c) Organized and focus on their decisions

- Determination of their orientation and conviction to be attached to their value-system and relationships
- Analyzing the issues and challenges with respect to their short-term plans and long-term ambitions
- Assessing their confidence in different scenarios and tasks

Findings

The students were analyzed as logical, ambitious and interactive. However, much similar to the limitations of their age, they are unorganized, lack time management, expression of thoughts and emotions. There is a greed for money along with the craving for relations. They take things more to heart than mind. They are relationship-oriented and satisfaction of emotional needs dominate them more than the satiation of intellectual needs. Apart from the general distractions of technology: TV, internet, etc. it was found that the emotional disturbance is the major cause of lack of achievement of targets for many.

41 students marked in affirmation of it and 9 reported their deficiency in relating to the logic of things as a usual phenomenon while one of the students did not respond to it. Varied answers were received to the open-ended question of what upsets them, some of which are as follows: lack of appreciation and recognition from others, loss of some relation, not getting what was expected or not getting results though worked hard, non-achievement of goals, feeling alone, being deceived, 'parents not understanding me', 'when I get less marks', 'no time for myself', etc. This question was responded by all 51 respondents out of which 38 responses can be categorized as professional in nature and rest 13 responses were informal and emotional in nature as feeling alone or emotional hurt by someone or themselves hurting parents, or friend not talking to them, dishonesty, etc. It has been found that personal causes do make an impact on the index of professionalism. The interconnection between the close-ended question of being logical and analytical and this open-ended question manifests one thing in the general outcome, those 8 who reported their unease in relation to logic are emotional in nature as their responses of being emotionally insecure in the analytics as being dominated by emotional vacuum or relationship vacuum is a hint of their takeaway on the track of feelings more than their mind. When this report of responses was discussed with them, they were unable to express themselves. The emotional struggle or being ridden for help in emotional matters impacts the personal well-being and sense of professionalism as well.

The test included a situation-based question based upon the abundance of money which read as 'If I were a billionaire...', Out of the 51 questionnaires, 2 did not respond to this. Of the given 49 responses two gave obvious and natural responses as: 'I will be very happy' and 'would still be down to earth'. 23 students gave noble responses which were not specific into plans as helping poor, needy; donating; charity; to aid in development of the country; do good for society; to build old age home, while the remaining marked conscious and business-oriented answers which can be enumerated as: construction of hospitals for poor; open schools and women welfare in rural areas; help family, myself, would buy luxurious cars, palatial homes, travel world, to buy Audi A6, to make a queue of Ferrari, to use it for making more billions, to become a trillionaire, open a chocolate factory, to invest it wisely, etc.

Implications

Due to their interactive disposition, these can be more suited for the profiles in marketing field. The tests were applied in total on 51 students of BBA-BCA (comprising all the three years) and MCA (first and second year). Of these 25 were males and 26 were females.

Male students are more daring, at times overconfident. The findings conform to the literature review that girls are introvert and disciplined.

Selecting the wrong person for a role is an expensive folly and leaves an everlasting impact upon the individual as well as for the organization. The inappropriate selection for the profile not only tarnishes the image and brand of the organization but also creates negative memory which is hard to be erased. Not only this, while the selection costs are difficult to calculate as the required competency and person are not equated, it bombards the issue of pressure and stress on the individual, colleagues, loss of profits and loss of future business clients and acclaims work-life imbalance issues on the employees of the organization. Thus, the relevance of these tests forms only a trivial portion of the selection process costs. Though, the set-up costs of training the personnel administering and evaluating the results, etc. could be high but these become rudimentary with frequency of use over a period of time in various matters which goes beyond recruitment.

Psychometric tests are done periodically to observe changes and administer behavior; to analyze undesirable shift in attitude and behavior and taking corrective actions. These tests aid in eliminating subjectivity and pretension. Its scope remains as it gives the landscape of the career selection and growth of the prospective employees in various industries and firms. These tests establish the rationality of the decision making once a candidate has made up his mind.

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Appendix

The following are some of the questions which formed the part of the questionnaire. For obvious reasons, only limited number of questions have been provided in this paper :

- Q1. Which of the following describes you best ?
- Introvert
 - Extrovert
 - Analytical
 - Doubtful
 - Can't Say
- Q2. When a task is given to you by your manager which you have not done it before, you usually adopt which of the following approach?
- Take it as a challenge
 - Become nervous
 - Discuss with the peers and seniors
 - Sit on the task and hope that it will get done some how
 - Can't Say
- Q3. During the team meetings and discussions which of the following you usually resort to
- Dominate the meeting
 - Aggressively put your point across the table
 - You have a point but you do not bring out explicitly
 - You contribute, speak out and bring out the anticipated implications of the issue under discussion
 - Can't Say
- Q4. During the break/ lunch, which of the following describes you best
- Sit quietly, have your lunch and go away
 - Join with your team members and share the lunch
 - Join with your juniors and enjoy their lunch as well as your own
 - Can't say
- Q5. When you are given a team task to be played, which best describes you in this scenario :
- You try to lead the team to the solution even though this is the task of the team leader
 - You want to give chance to others so that they also come up to lead the team one day
 - You sit quiet and do what the team leader asks you to do it
 - Can't say
- Q6. When deciding on the career goals :
- I fully aware of where I want to go
 - I have not decided yet
 - I go along and take things as they are
 - I am not sure what I want to do with my life
- Q7. When team members are opposing my point of view or ideas when I know that they are correct, I usually
- Try to understand their point of view and explore the possibilities
 - I try to aggressively put my point across
 - I gradually try to lead them to the correct solution by taking their point of view as well
 - I just give up and let them do what I want to do
- Q8. When I am placed in a new role or in a place for a job, I
- First try to understand the situation or the job
 - Try to bring in some system in the place

- Try to gather as much knowledge as is possible before streamlining things
- Let the things go on as they are

Q9. When meeting with the customers/ client I try to

- Add value to the meeting
- Stick to the agenda of the meeting
- Try to go along with my boss
- Try to contribute ignore the important points and to put my point across anyhow

Q10. If I fail to achieve the result or complete the task in time, I

- Usually go into depression
- I blame my fate
- Try to understand the point of failure and learn from the mistake
- Do nothing

The Relationship between Perceptions of Organizational Politics and Employee Attitudes, Strain, and Behavior

Neetu Sharma

Abstract

This study examined the relationship between need for power and personal attributes with the perception on office politics. It involved 130 government officers who are in grade 41 to 44 and serve in government agencies in Northern Region of Peninsular Malaysia. They are selected by using disproportionate stratified random sampling method. In measuring perception of office politics, this study has adopted Kachmar and Carlson's (1997) perception of politics measurement. In addition, personal attribute was measured by adopting Personal Attributes Questionnaire developed by Spence and Helmreich (in Ward, Thorn, Clements, Dixon and Sanford, 2006) and the researcher has utilized Needs Assessment Questionnaire (NAQ) constructed by Heckert, Cuneio, Hannah, Adams, Droste, Mueller, Wallis, Griffin and Roberts (1999) to measure need for power. Correlation and regression analyses results have exhibited that both factors of need for power, namely need for dominating and need for authority, have a significant negative relationships and effect on perceptions of politics. This result has carried evidence that when employees feel that politics become a dirty game in an office, they tend to reduce their need for dominating and need for authority in implementing their job. A dirty political game will reduce employees' motivation. Hence, they will just follow the instruction ordered by their superior without showing their creativity.

Keywords : Office Politics, Leaders' Attributes, Leaders, Need for Power

Introduction

Organizational politics or office politics is really about manipulating power and authority to build relationship to get things done. In other words, it is about "stabbing" people to achieve objectives. Organizational politics is the use of one's individual or assigned power within an employing organization for the purpose of obtaining advantages beyond one's legitimate authority. Those advantages may include access to tangible assets, or intangible benefits such as status or pseudo-authority that influences the behavior of others. Both individuals and groups may engage in organizational politics (Weissenberger, 2010). Organizational politics, sometimes referred to as office politics (which strictly only includes office workers, although the meaning is usually intended in the wider sense) is "the use of one's individual or assigned power within an employing organization for the purpose of obtaining advantages beyond one's legitimate authority (Parker,

Dipboye, and Jackson, 1995). This definition is in line with the definition of office politics brought by Dhar (2009) where he defined office politics as the exercise of power to negotiate different interests amongst members while maintaining one's interests in certain organizational issues. Hence, in office politics game, conflict always exists due to power competition. This present study attempts to examine the relationship between leaders' attributes and need of power with organizational politics. Due to limited study on organizational politics was performed in Malaysian government agencies; this study will evaluate the relationship between understudied variables amongst officers in government agencies.

Problem Statement

Organizational politics is a major issue in today's organizational behavior because it involves individuals who manipulate their working relationships consumes time and resources for their own

gain at the expense of the team or company. This situation causing problems for the individuals who work together, the end result can be far more devastating. Employees and managers who concentrate on the political aspects of work may have less time to pay attention their jobs. Study by Ferris and Kachmar (1992) has shown that perception of politics predicted job dissatisfaction among employees. This study has exhibited that negative influential between relationship with supervisor and organizational politics perception. Dhar (2009) has stated that organizational politics produced a threat on staff retention and work productivity.

In Malaysia, few cases that have been heard in Industrial Court were involving office politics. For example, in Ahmad Tajudin Ishak Vs Suruhanjaya Pelabuhan Pulau Pinang ([1997] 2 CLJ 225), the claimant claimed that his dismissal was in the basis of office politics where he argued that he has been discriminated. In the Pan Pacific Resort Pangkor Vs Raja Letchmi G Sundra Rajoo (Award 989 of 2008), the claimant has claimed that the General Manager has used his power to discredit her performance. In Dr Chandra Muzaffar Vs Universiti Malaya (Originating Summons No: R2-25-36-1999), the claimant has prosecuted that his contract was not renewed because of political reasons. As being exhibited by the judge in Puan Low Pak Chan Vs Hitachi High – Technologies IPC (M) Sdn. Bhd. (Award 1183 of 2009), that office politics may create employee's resistance, this study tends to examine the relationship between employees' need for power and their perceptions on organizational politics.

Significant of Study

Power competition and manipulation become the essence in office politics. Organizational politics has been discussed literary in 1970's with a focus on aspects of power and bureaucracy (Drory and Romm, 1988). The practice of organizational politics can have an even more serious effect on major business processes such as strategy formation, budget setting, performance management, and leadership. This occurs because when individuals are playing organizational politics, it interferes with the information flow of a company. Information can be distorted, misdirected, or suppressed, in order to manipulate a situation for short term personal gain. Besides causing problems for the individuals who work together, the end result can be far

more devastating. Employees and managers who must concentrate on the political aspects of work may have less time to pay attention their jobs. This translates into financial loss which may in turn translate into job loss. Kacmar, Bozeman, Carlson and Anthony (1999) exhibited that intent to turnover and job satisfactions were among the consequent outcomes from organizational politics. As most of the office political game occur in managerial level, thus, it becomes vital to study the relationship between leaders' attributes and need for power with office politics.

Literature Review

Organizational politics

It was indicated that in an organization, politicking activities in organization may create conflicts. The stress and social exchange perspectives are useful to understand reactions to perceptions of organizational politics (Chang Rosen, Levy, 2009). This is due to political behavior is a fact of life in organization and encompasses those activities that are not required as part of one's formal role in the organization. Factor analyses of data from an organizational climate survey performed by Parker, Dipboye and Jackson (1995) suggested that organizational politics is an important dimension of peoples' perception of the work environment.

As maintained by Chang Rosen, Levy (2009) perceptions of organizational politics had a stronger relationship with role conflict. The authors also revealed that perceptions of organizational politics have strong, positive relationship with strain and turnover intention and strong, negative relationships with job satisfaction and affective commitment. In particular, perceptions of organizational politics were associated with increased psychological strain, which associated directly with reduced performance, as well as indirectly with increased turnover intentions through reduce morale.

Personal attribute

Appropriate personal attributes amongst leader are important in managing their subordinates. By using Delphi method, a study on personal attributes needed by professionals has been conducted by Wakou, Keim and Williams (2003) listed seven important attributes ranked by professionals. These attributes were independent, strong ethic, bilingual, has persuasive ability, loyal,

persistent and courageous. A study regarding affinities for personal attributes by Hartz, Watson and Noyes Jr. (2005) has found that a person's well-being is strongly influenced by the attributes of close associates such as family or close friends.

Spence and Helmreich (in Ward, Thorn, Clements, Dixon and Sanford, 2006) measuring personal attributes with three dimensions namely Masculinity (scale describe such traits as self-confidence and competitiveness), Femininity (scale items pertain to kindness and interpersonal warmth) and Masculinity-Femininity (scale has a mixture of masculinity and femininity). Studies regarding personal attributes have shown that in achieving particular objectives, individuals' personalities and their strategy to gain power will influence their attributes to control and influence other parties.

Need for power

The need of power is more associated with leaders. As mentioned by McClelland and Boyatzis (1982), need of achievement was associated with lower level workers, while leaders are more involve with need for power which associated with influencing others. Need for power refers to the ability to influence others, defeating an opponent or competitor, winning and arguing or attaining a position of greater authority (Yulk, 1989). McClelland (1970) has divided need for power into two dimensions which are socialized power and personal power. Socialized power (including influencing others for the sake of organizational goals) is the characteristic of effective manager. On the other hand, personal power portrays personal dominance or aggression (Harrel and Stahl, 1981). Therefore, in utilizing politics in organization, employees will utilize or manipulate their power to win the competition among themselves.

Research Methodology

This study is categorized as correlational study because it examined the relationship between leaders' attributes and need for power as independent variables with organizational politics as dependent variables. The total of 130 respondents has been selected by using proportionate stratified random sampling. Questionnaires were distributed to respondents to evaluate their perception on items that measured each variable. Instruments involved in this study were adopted from various sources. In measuring perception of politics (POPS), this study has adopted instrument constructed by Ferris and Kachmar (1994). Needs Assessment Questionnaire (NAQ) constructed by Heckert, Cuneio, Hannah, Adams, Droste, Mueller, Wallis, Griffin and Roberts (1999) have been used in examining need for power variable. This needs assessment tests explicit motivation that encompasses four type of motivation including need for achievement, need for affiliation, need for dominance (power) and need for autonomy.

According to this present study, only need for power items being considered to be used. To measure personal attribute, this study will adopt Personal Attributes Questionnaire developed by Spence and Helmreich (in Ward, Thorn, Clements, Dixon and Sanford, 2006). This measurement has three scale namely Masculinity (scale describe such traits as self-confidence and competitiveness), Femininity (scale items pertain to kindness and interpersonal warmth) and Masculinity-Femininity (scale has a mixture of masculinity and femininity). A pilot test is performed in order to examine the reliability of items consist in instruments used in this study. Table 1 indicates the Cronbach Alpha value for every variable.

Table 1: Reliability test results

Variables	Dimensions	No of Items	Cronbach Alpha (α)
Perception of Politics (POPS)	General Political Behavior Go ahead to get along Pay and promotion policies	15	.609
Need For Power	Need for authority Need for dominating	10	.728
Personal attribute	Masculinity Femininity Masculinity-Femininity	24	.787

According to Sekaran (2003) all variables are considered reliable as the Cronbach Alpha values are exceeding .60. Before pursuing further analysis, this study executing data screening which involved normality, linearity and outliers tests. For normality test, examination of skewness and kurtosis is performed where both values must score ± 1.96 . Scree plot test is executed in determining linearity and this study performed multivariate outlier for outlier identification. To identify dimensions of each variable involve in this study, factor analysis is carried out. Number of factor will be determined by eigenvalue where factor with eigenvalue is equal or greater than 1 will be accepted. In identifying the relationship between variables understudied, correlation analysis has been performed. In this analysis, the value of correlation coefficient (r) is examined. The value range for correlation coefficient is from -1 to +1, with +1 indicates a perfect positive relation, 0 indicates no relationship, and -1 indicates a perfect negative or reverse relationship (Hair, Jr, et. al, 1998). Meyers, et. al (2006) have categorized correlation

coefficient value of .5, .3 and .1 as large, moderate and small.

Data Analysis

In data screening, the scree plots for all variables showing that they were linear. Normality test has exhibited that the skewness and kurtosis values for all variables falls within accepted value (± 1.96). To indicate outliers, this present study has performed multivariate outlier test where Mahalanobis Distance Value has been used. In this test, the value of chi squared ($\lambda = 18.467$) was referred. From this test, two cases have been eliminated from further analysis as these cases scored a λ value that greater than 18.467.

Factor analysis has been executed to determine total of dimensions consist in understudied variables of this study.

Follow is the result from factor analysis by using varimax rotation.

Table 2 : Factor Analysis Result

Factor	Dimensions	KMO Value / Bartlett test	Reliability test (alpha value)
Perception of Politics (POPS)	POPS	.806 / .000	.834
Need for Power	Need for dominating Need for authority	.764 / .000	.734 .738
Personal Attribute	Femininity Masculinity	.778 / .000	.919 .768

The Effect of Need for Power and Personal Attribute on the Perceptions of Office Politics

In Correlation analysis has been performed in examining the relationship between variables understudied. Table 3 exhibits that only dimensions for need for power, namely, need for authority and need for dominating are significantly related with perception of politics at $p \leq 0.05$.

Table 3 : Correlation Analysis Result

Correlations		Need for authority	Need for dominating	Attribute Female	Attribute Male
Perception of politics	Pearson Correlation	-.298**	-.185**	-.056	.002
	Sig. (2-tailed)	.003	.024	.578	.981
	N	128	128	128	128

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

In examining the effect of need for power and employees' attribute on the perceptions of office politics, regression analysis has been executed. As what being determined by correlation analysis, in regression analysis, the result also showing that both dimensions

for need for power, namely need for authority and need for dominate, were significantly and negatively influenced the perception of politics. Table 4 shows the result of regression analysis.

Table 4: Coefficients Table for Perceptions of Politics

	Dependent variable Usage (Standardized Beta)
Need for authority	-.354*
Need for dominate	-.232*
Attribute Female	.020
Attribute Male	.215
F value = F(8,92)	8.120*
R²	0.167
Adjusted R²	0.094
Durbin-Watson	2.114

* p<0.05

a Dependent Variable: Perceptions of Politics

Discussion and Conclusion

An organizational politics must be seen as a positive agenda where politics must be used by superior to gain power to influence and control subordinates to execute tasks ethically. Without politics (manipulation of power), officers cannot get a support from their employees in executing works. Therefore, organizational politics must be performed wisely in order to create a harmonious industrial relations environment and to eliminate worker's discrimination. Political game in organization may affect the performance of employees (Parker, Dipboye, Jackson, 1995; Robbins, 2001). Understanding the effect of organizational politics is essential to create the harmonious industrial relation in organization. Studies by Salem and David (2011) and Dhar (2011) have inculcate demographic factors such as gender and employment tenure in their study regarding organizational politics, thus, this present study extents the testing of educational level as one of demographic factor on the perception of organizational politics.

This present study involved government officers who are categorized as middle management officers because, as maintain by Drory (1993), employees in supervisory positions normally enjoy greater authority and autonomy, more formal power and greater opportunities to have influence on higher organizational levels. This present research involved 130 respondents from government agencies. 42 respondents or 40.78% experienced

with office politics and majority of them hold a bachelor degree. Besides, all officers who hold master degree have experiencing office politics. This finding shows that level of education may influence the perception of politics in organization. Employees' perception on organizational politics will become higher as they have higher level of academic.

This is because the employees with higher education alert and know about their employment rights and they will always demand for their rights being fulfilled. If they feel that they were treated with unjust treatment, they will feel that they were politically framed. Drory (1993) has concluded that the organizational politics often involve both winners and losers in a struggle for organizational advantages. It may bring benefit for some organization members, while being detrimental to others. This study has extracted need for authority and need for dominating as the dimensions for need for power. These dimensions were parallel with dimensions suggested by McClelland (1970) even though he has used different names.

According to him the two dimensions for need for power including socialized power (influencing others for the sake of organizational goals) which portray need for authorize and personal power (personal dominance) which defines need for dominating. Result from multiple regression analysis indicated that both dimensions of need for power were significantly affect the perception of politics at $p < 0.05$. The direction of this effect is negative.

This brings a meaning that when the officers feel that politics become the culture in managing works, they will reduce their authority and dominate power. They will reduce their trust with their superior and reaching the "at least the job done" objective. Meaning that, they will do as what been ordered by their superior without showing their full commitment in enhancing the quality of the tasks assigned to them. As maintained by McClelland and Burnham (1976), need for power determined high morale amongst leaders. Unfortunately, the existing of organizational politics will create negative behavior for example reducing the OCB (Parker, Dipboye and Jackson, 1995) and jeopardizing relationship (Chang, Rosen and Levy, 2009).

Hence, the first hypothesis is supported. The negative effect of need for power on the perceptions of politics will reduce the intention of officers in showing their talent in implementing tasks given to them which may reduce their performance that will direct to reducing their desire for promotion. This has been highlighted by Chang, Rosen and Levy (2009), perceptions of organizational politics were associated with increased psychological strain, which associated directly with reduced performance, as well as indirectly with increased turnover intentions through reduce morale. Sogra, Shahid and Najibullah (2009) concluded in their study on politics in performance appraisal that employees' job satisfaction and commitment will reduce when they feel that their performance appraisal was politicized and resulted a punishment. Hence, they suggest that supervisors must not manipulate their power in terms of managing subordinates.

The negative effect result of need for power on organizational politics is in line with the previous studies. Drory (1993) exhibited that the perception of political climate enhancing employees' negative attitudes; Ehigie, Kolade and Afolabi (2006) have found that need for power has a negative relationship with leaders' concern with citizenship well being; and Parker, Dipboye and Jackson (1995) listed the negative behaviors that may shown by employees in political environment such as having lower overall satisfaction, believing that the organization does not value high work standards, challenging work and integrity, evaluating senior management as ineffective, perceiving that the organization does not support innovation and believing that employees are not loyal to the organization.

The result from this study showed that when employees perceived that office politics occurring in their organization, they will reduce their power and they will just follow the direction made by their superior. This phenomenon will direct to reduction of creativity and innovative thinking amongst employees (Dhar, 2009). In organizational politics, manipulation of power is exercised where parties will compete for power by playing the politicking game. To those who don't have good tactics will lost the game and may be jeopardizing his position in organization. Hence, he might be discriminated. This situation will reduce employees' motivation and morale (Chang, Rosen and Levy, 2009).

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A Study of Software Reliability Models

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Abstract

There are several models of software reliability which have been proposed by several researchers during past 30 years. Object-oriented approach is one of them and is becoming very popular in software development community as an alternative to traditional approach i.e. structured analysis & design methodologies due to obvious reasons. Consequence, this approach has become de facto standard of software development organization. As we know, software reliability is one of the important dynamic quality factors in overall quality models proposed in the literature. Several guidelines are available in literature that suggest various "do's" and "don'ts" to produce an "easy to maintain" and "reliable" system. Measuring s/w reliability is a complex task and there are several proposed models given by researchers but none of them is complete. Instead we can use combination of few models such as OOP and ANN models to measure the reliability of s/w in a better way. OOPs based software reliability do exist and can be used starting in requirements phase to software design phase. In this paper we study several s/w reliability models and propose combination of models which could be used for assessment of early reliability of software.

Keywords : Software, Assessment, Reliability, Inheritance, Coupling & Cohesion.

Introduction

Software Reliability is the probability of failure-free software operation for a specified period of time in a specified environment. Software Reliability is also an important factor affecting system reliability [2]. It differs from hardware reliability in the fact that it reflects the design perfection, rather than manufacturing perfection. The high complexity of software is the major contributing factor of Software Reliability problems. Software Reliability is not a function of time although researchers have come up with models relating the two. The modelling technique for Software Reliability is reaching its prosperity, but before using the technique, we must carefully select the appropriate model that can best suit our case. Reliability is the ability to operate failure-free [8]. More specifically, it is defined as the probability of a product to operate free of failures for a specified period of time under specified operating conditions.

This definition applies to products, services, systems, hardware, and also software. Reliability is a quality attribute that is highly

valued by customers and users of products and services. We need a consistent definition of reliability between software, hardware, and systems. This is so they may be combined to determine the reliability of a product or service as a whole delivered to a user. However, there are differences between hardware and software that affect how we analyze their respective reliabilities [2]. These differences are described. Software reliability engineering (SRE) assesses how well software-based products and services meet user's operational needs. SRE uses quantitative methods based on reliability measures to do this assessment.

The primary goal of SRE is to maximize customer satisfaction. SRE uses quantitative methods as statistical estimation and prediction, measurement, and modelling.

As the reliability of a product or service is highly dependent on operating conditions and the reliability of software is related to how the software is used, the quantitative characterization of the use of software is an integral part in SRE. Object oriented

software development is a very new way (natural way) of thinking about software based on abstractions of objects that exist in the real world or problem domain. Objected Oriented approaches are getting a lot of attention from software development community. This is due to a variety of claims by many software researchers and practitioners that an object oriented approach to software development leads to better productivity, reliability, maintainability, software reusability and increased extensibility. A number of papers have investigated the relationship between design metrics and detection of faults in Objected Oriented software [6, 7, 8, & 9].

Software reliability modeling is the utmost productive research within software reliability engineering and over 100 models have been developed through different approaches ([10], [11], [12], [13]). They provide useful feedback to the management to keep the software process under control. Numerous studies have been performed in the area of early software reliability predictions & importance over the last few years (Tian, Jeff 2000, Nagappan, N. 2004, Cukic 2005, Tripathi, R 2005, Ion, R.A. 2006, Hu, Q.P. et. al 2006 and many others) using different modeling techniques. Early software reliability prediction models are of paramount importance since they provide early identification of cost overruns, software development process issues, optimal development strategies, etc.

Generally, these models are developed through two approaches: analytical and data-driven. Analytical growth models (SRGMs) are stochastic models to describe the software failure process with essential assumptions to provide mathematical traceability. On the other hand, data-driven models are developed from historical software failure data, using regression, time series and artificial neural network approaches[13].

We first, briefly describe the "OOD Methodology", "Error, Fault, and Failure", "The Concept of Reliability", "Software Reliability Model", "Software Metrics", followed by "Known Reliability Metrics".

1.1 OOD Methodology

Object oriented design aims for robust software that can be reused, refined, tested, maintained and extended. There are several object oriented design methods, viz. the Booch method, the Jacobson method, the Rumbaugh method and the Wirfs-Brock method. Each of these object-oriented techniques identifies objects as well as the internal details of these objects too. The

OMT methodology uses three kinds of models, the object model, dynamic model and functional model to describe a system. The object model describes the static structure of the object in a system and their relationships. The object model contains object diagrams. The object diagrams represent a structure graphically. This model forms the starting point for object design. The dynamic model of a system describes the state of various objects changes when events occur. The dynamic model is used to specify and implement the control aspects of a system. The functional model is used to describe the functionality of the system i.e. the computation that takes place within a system. The functional model contains data flow diagrams.

1.2 Error, Fault, and Failure

The term errors, faults and failures are often used interchangeably, but do have different meanings. A fault occurs when a human makes mistakes, called an error, in performing some software activity. A failure is a departure from the system's required behaviour. In other ways, we can say that, human error can lead to a fault and a fault can lead to failure. Thus we can say, a fault is an inside view of the system, as seen by the eyes of the developers, whereas a failure is an outside view, a problem that user can see. Not every fault corresponds to a failure; for example, if faulty code is never executed, then the fault will never cause the code to fail.

1.3 The Concept of Reliability

The reliability of a software system is defined as the probability of failure free operation for a given time duration under specified conditions of operation. The user oriented reliability of a program (in a certain user environment) is defined as the probability that the program will give the correct output with atypical set of input data from the user environment. The sequence of codes executed in a particular run is dependent on the input data and an error in the non executed statements or branches does not have any effect on the output of the program, the system reliability depends on the probability that a bug is activated in the run. The reliability of the system, therefore, depends on the user profile. The user profile summarizes the dynamic characteristics of a typical execution of the program in a particular user environment [1]. The relationship between software quality factor and metrics can be seen in [(2), page 522, fig. 18.2].

The reliability of a component, of an object based software system that is a class can be viewed in terms of initial number of errors of faults (bugs) that can be present when a class is designed or implemented. Certain earlier studies have shown the relationship between the number of initial faults and Cyclomatic complexity of a component of structured software systems [3]. Thus the number of initial faults in the methods of the objects and the number of faulty definitions/assumptions/implementation of its attributes can also indicate a measure of reliability of classes that are modules of a software system. Similarly the Control objects responsible for implementation of the dynamic behavior of software system can also be considered.

1.4 Software Reliability Models

Many Software reliability models have been developed over the years. Within these models, one can distinguish two main categories [13]:

- 1) Software reliability prediction models typically address the reliability of the software early in the lifecycle at the requirements, preliminary design, detailed design or coding level. Predictive models are used to assess the risk of developing software for a given customer under a given set of requirements within given resources, staff, budget, schedule, and development environment i.e. before the project truly starts.
- 2) Software reliability estimation models evaluate current and future software reliability from failure data gathered beginning with the integration testing of the software. In the category of estimation models one can count reliability growth models, input domain models and fault seeding models.

1.5 Known Reliability Metrics

Many models have been proposed for software reliability assessment for structured programs including the Jelinski and Moranda models, the Goel and Okomuto model, Musa's models and Littelwood and Verall model. All these models are based on the estimation of the number of initial faults present in a program component. Hence the estimation of number of initial faults in a program unit of structured programs is also considered as a reliability model. Cheung [1] discusses the definition of user-oriented reliability and its relationship to the user profile. He has

developed user-oriented reliability model to measure the quality of service a program provides to a user. The rest of the paper is organized as follows: Section 2 discusses various points of interest, given as guidelines in the literature regarding design of reliable software systems. We propose some models in section 3, based on the discussion given below in section 2. Section 4 concludes the paper.

2. Programming for Reliability

To increase the reliability by preventing software errors, the focus must be on comprehensive requirements and a comprehensive testing plan, ensuring all requirements are tested. Focus also must be on the maintainability of software since there will be a 'useful life' phase sustaining engineering will be needed [16]. Good engineering methods largely improve software reliability.

Any Object Oriented System can be characterized mainly by the encapsulation, inheritance and polymorphism. In Object Oriented System, class is the fundamental unit, therefore design of classes has a major impact on the overall quality of the design. So, it is good starting point to introduce reliability into the Object Oriented system. It is known that system reliability is inversely proportional to the number of unrepaired defects in the system. Here, there are some suggestions available to design reliable Object Oriented systems.

Improved programming techniques, better programming languages and better quality management have lead to very significant improvements in reliability for most software.

Reliability in a program can be achieved by avoiding the introduction of faults and by including fault tolerance facilities which allow the system to remain operational after a fault has caused a system failure. Faults are detected before the software is put into operation. Reliability in a program can also be achieved by defensive programming approach. Defensive programming is an approach to fault tolerance which can be carried out without a fault-tolerant controller. Defensive programming technique which involves incorporating checks for faults recovery code in the program. Faults are detected before they cause a system failure [3]. Reliability in Object Oriented Systems can be achieved by avoiding excess height of inheritance tree, large value of WMC, RFC, CBC and small value of NOC metric.

3. The Observations

The class is the fundamental unit of an Object Oriented System. Therefore, measures and metrics for an individual class, the class hierarchy, and class collaborations will be invaluable to a software engineer who must assess design quality. The objective is to consider the characteristics of classes and the system for which metrics have been worked out. This section attempts to summarize the relationship between the "numbers of initial faults" in a class of software in terms of known metrics available for classes of Object based software. The section finally proposes to work out a software reliability model treating this "number of initial faults" as a basic parameter for reliability modeling of object oriented software.

1) The Depth of Inheritance tree (DIT) of a class C in an inheritance hierarchy is the depth from the root class in the inheritance tree. In other words, it is the length of the shortest path from the root of the tree to the node representing C or the number of ancestors C has. In case of multiple inheritances, the DIT metric is the maximum length from a root to C. The experiments show that DIT is very significant in predicting defect proneness of a class; the higher the DIT the higher is the probability that a class is defect-prone [4, 6]. Thus we can say that

No. of fault oc DIT(I)

2) Suppose class C has methods M_1, M_2, \dots, M_n defined on it. Let the complexity of the method M_i be C_i . The WMC (Weighted methods per class) metric is defined as $WMC = \sum_{i=1}^n C_i$. The analysis shows that the WMC metric has a reasonable correlation with fault-proneness of a class. The larger the WMC of a class the better the chances that the class is fault prone [4, 6]. Thus we can say that

No. of fault oc WMC(I)

3) The RFC (response for a class) value for a class C is the cardinality of the response set for a class. The response set of class C is the set of all methods that can be invoked, if a message is sent to an object of this class. This includes all the methods of C and of other classes to which any method of C sends a message. The experiment shows that the RFC value is very significant in predicting the fault proneness of a class. The higher the RFC value the larger the probability that the

class is defect prone [4, 6]. Thus we can say that

No. of fault oc RFC(iii)

4) The CBC (Coupling between Classes) value for a class C is the total number of other classes to which the class is coupled. Two classes are considered coupled, if methods of one class use the method of instance variables defined in the other class. The experiment shows that the CBC value is very significant in predicting the fault proneness of a class. The higher the CBC value the larger the probability that the classes defect prone [4, 6]. Thus we can say that

No. of fault oc CBC(iv)

5) The NOC (Number of Children) metric value of a class C is the number of immediate subclasses of C. The experiment shows that the larger the NOC, the lower the probability of detecting defects in a class. That is the higher NOC, classes are less defect prone [4, 6]. Thus we can say that

No. of fault oc NOC(v)

6) The LCOM metric is the number of methods that access one or more of the same attributes. If LCOM is high, methods may be coupled to one another via attributes. This increases the complexity of the class design, thereby increasing the likelihood of errors during development. Thus we can state that

No. of fault oc LCOM(vi)

From equations (i), (ii), (iii), (iv) and (v), we can say that

$$\text{No. of fault} = K \cdot (\text{DIT} \cdot \text{WMC} \cdot \text{RFC} \cdot \text{CBC} \cdot \text{LCOM}) / \text{NOC}$$

Where, the constant K will have to be worked out for a specific software team of concern organization based on experience of team members and other characteristics related to software processes. The number of faults can be used to determine the total number of faults in software in terms of number of initial faults in all the various class of the object based software. An alternate approach could be to develop a reliability model of one single class using the number of initial faults in that class as a basic parameter and then a general reliability model for the total software can be expressed in terms of individual classes/objects.

Conclusion

This paper explains the relationship between the number of initial

This paper explains the relationship between the number of initial faults present in an object and impact of these faults on the reliability of s/w project. In OOD the "number of initial faults" serves as an important parameter of reliability model for software. These observations will be helpful in working out a software reliability model for object based software. Software reliability is a key part in software quality. The study of software reliability can be categorized into three parts: modelling, measurement and improvement. Software reliability modelling has matured to the point that meaningful results can be obtained by applying suitable models to the problem. There are many models exist, but no single model can capture a necessary amount of the software characteristics. Assumptions and abstractions must be made to simplify the problem. There is no single model that is universal to all the situations. Software reliability measurement is naive. Measurement is far from commonplace in software, as in other engineering field. "How good is the software quantitatively? As simple as the question is, there is still no good answer. Software reliability cannot be directly measured, so other related factors are measured to estimate software reliability and compare it among products. Development process, faults and failures found are all factors related to software reliability. Software reliability improvement is hard. The difficulty of the problem stems from insufficient understanding of software reliability and in general, the characteristics of software. Until now there is no good way to conquer the complexity problem of software. Complete testing of a moderately complex software module is infeasible. Defect-free software product cannot be assured. Realistic constraints of time and budget severely limit the effort put into software reliability improvement. If not considered carefully, software reliability can be the reliability bottleneck of the whole system. Ensuring software reliability is no easy task. As hard as the problem is, promising progresses are still being made toward more reliable software. More standard components and better process are introduced in software engineering field. We can enhance the reliability of software by adopting the CMM and SIX SIGMA processes in any organization. We will discuss CMM and SIX SIGMA stages in the coming chapters of the thesis.

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A Study of Growth and Risk Aspects of Indian Steel Industry

Renu Kumari Verma

Abstract

Steel industry of India has come a long way of progress since the independence under the guidance of planning commission and due to its strategic significance, steel industry got a key position in almost all five year plans. Till 1991 it was nurtured under a protective net of the government, so it remained deprived from the influence of competitive global business environment and after that it was instructed to survive by managing finance through their internal resources. The forecasting about Indian steel industry as an emerging global key producer sounds like a fad and a self proclaimed badge rather than a truth, when we consider the comparative growth trend of Indian steel industry. This paper is an effort to discuss those facts, which reveal weaknesses of financial management, specifically liquidity management in Public Enterprises, environmental factors viz. poor demand (by household and industries both), comparative global productivity efficiency, global status and anti dumping laws imposed by overseas counterparts.

Keywords : Steel Industry, Growth Trend, Global Business Environment, Demand

Introduction

History of Indian steel industry

The history of steel-manufacturing in India can be traced back to 400 BC, when the Indian archers recruited by Greek emperors used steel tipped arrows. Another example, the Iron Pillar near non-rusted Qutab Minar 380 AD, has been a miracle to the modern scientists. But those shining glory of Indian steel did fade away during invaders rule. A new beginning of modern era was initiated in 1874 when the Bengal Iron Works (BIW) came into being at Kulti, near Asansol in West Bengal. In 1889 the Bengal Iron and Steel Company acquired the plant and in 1936 it became Indian Iron and Steel Company (IISCO). In another effort on August 27, 1907, the Tata Iron and Steel Company (TISCO) was set up as a Swadeshi venture to produce 120,000 tonnes of pig iron at Sakchi (renamed Jamshedpur) in Bihar, which started the production of pig iron production in December 1908. TISCO later expanded its production capacity to one million tonnes ingot

by the time of independence. In 1937 the Steel Corporation of Bengal (SCOB) was formed, which started production in its Asansol plant and later in 1953, it was merged with IISCO.

After independence the Government monopolised the production of steel along with the existing manufacturing units in the private sector according to the first Industrial Policy Resolution and committed to the development of this key industry. Private sector was given benefit through the establishment of downstream units to use pig iron, billets, blooms and flat products manufactured by the public sector steel plants and thus become a supporting counterpart.

A chain of steel plants was started by the Government, all over the country in the public sector i.e. at Rourkela in Orissa, at Bhilai in Chhattisgarh, at Durgapur in West Bengal, at Bokaro in Bihar followed by the fifth plant at Visakhapatnam in andhra Pradesh. In private sectors it was repeated with the set up of Alloy Steel Plant, Salem Steel Plant, Kalinga Iron Works, Malavika Steel Ltd., Jindal Vijaynagar Steel Ltd., etc. The glorious SAIL came in existence

on January 19, 1954 with the set up of the Hindustan Steel, an entirely state owned company for a rapid industrialisation of the country. The Hindustan Steel (HSL) was made responsible for the supervision and control of Bhilai in Chhattisgarh and Durgapur in West Bengal, under the Second Five Year Plan. The 1 million tonne phases of Bhilai and Rourkela Steel Plants were completed by the end of December 1961 and the 1 million tonne phase of Durgapur Steel Plant was completed in January 1962. The crude steel production of HSL went up from 158 million tonne (1959-60) to 1.6 million tonne. SAIL became the largest leading **steel manufacturer** of India, which produces both basic and special steel with its five integrated steel plants and three specialized facilities meant for domestic construction, engineering, power, railway, automotive and defence industries and also for export to overseas markets.

SAIL's produces a line of products including hot and cold rolled sheets and coils, galvanized sheets, electrical sheets, structural, railway products, plates, bars and rods, stainless steel and alloy steel. In 2003 the output of SAIL surpassed ten million tonnes of saleable steel and its export grew up by 53 percent over the previous year. By 2004, its volume increased to 12.5 million tonnes.

Management of Finance

Being the capital-intensive sectors, steel has been growing mostly under the regulation of the government. The steel industry of India is a cluster of public and private sectors production units. Natural difference of these production units is visible in their management of finance too. For example unlike the capital structure of private sector steel making units, public enterprises were suggested the rule of capital structure on the basis of 1:1 debt-equity mix by the Government of India in 1961, which faced vehement opposition by the managers in this sector.

Later the Committee on the Public Undertakings and the Administrative Reforms Commission lent their support to the contention of managers. Arguments of few executive support the Government policy of considering the ownership structure of public enterprises, and agree that differentiating between equity and loans is immaterial in the case of PEs as both the dividend and the interest are transfer entries. But that argument lost its longevity after the introduction of New Economic Policy and its

implementation in steel sector as public enterprises were instructed and directed to approach the capital and financial markets for raising bonds and public deposits. Moreover, this argument also falls against the basic principle of financial motivation of optimization of the capital structure.

Financial management is a vast topic to cover for steel industry where natural differences in operational methodologies are inherent between public sector and private sector manufacturing units. But the significance of liquidity is an integrated part of overall finance management in the manufacturing units in either sector as it has a bearing on the consolidation of short run solvency position of the firms.

This is why every business unit carefully ensures the generation of sufficient liquid fund by maximizing sale, where collection of receivables by the time determines the liquidity position of a firm. Because a short cycle of conversion of sales into cash better the status of a firm by helping it to manage cash to meet its instant need and obligations. Regardless to the financial strength of a firm need of liquidity in the form of cash and bank balance, marketable security and bills receivables etc. are essential to deal with the issues of the realization of current assets. Moreover cash conversion cycle is considered as one of the indicators of efficient financial management as it reflects the efficiency of a business unit to meet its short-term liabilities.

Though steel manufacturing public enterprises in India did not bother the liability concern due to their status approved by parliament. Parallel to these growth story of steel industry supporting Industrial Policy underwent to a significant changes in 1956 and then in 1991. Arrival of New Economic Policy changed the relaxing attitude of public enterprises towards the management of finance. Economic Reform of 1991 showed public enterprises the way to generate resources for them internally to finance their developmental activities and manage surplus for financing the needs of priority sectors. The Economic Policy of 1991 brought some fundamental changes in order to improve the financial efficiency and productivity of assets in public sector manufacturing units. The Policy in 2000-01 added total investment in central government enterprises, which increased from a meagre Rs. 29 crores to Rs. 3,24,632 crores in 2002 and it envisaged new objectives for the Public Enterprises to raise resources direct from the market against their security for

providing an adequate safety net to its employees, emphasizing increasingly on the strategic sale of identified Public Enterprises and using the receipts from disinvestment and privatization for meeting the expenditure in the social sector, and retiring public debt.

The reform proved to be fruitful as an increment in the internal resources of the public enterprises was registered over the year though the surplus generated by them was less to meet their economic, political and social objectives. Ultimately extra budgetary resources were raised by the public enterprises and they received budgetary support from the government for their total plan outlay.

As another dimension of the new industrial policy of 1991, iron and steel industry was exempted from the provision of compulsory licensing. Eventually from May 24, 1992 iron and steel industry was brought in the 'high priority' list industry for automatic approval for foreign equity up to 51%, and later on which was increased to 74%.

Also strategically in an effort of promotional activities of global marketing, export-import regime was made more favorable for iron and steel by withdrawing the freight equalization scheme to remove freight disadvantage to States located near steel plants. Consequently the production of Indian industry went up from mere 1.1 million tonnes in 1951 to 23.37 million tonnes in 1997-98 defying overall economic slow-down in the country. When the global steel industry was struggling in late 1990s and into the new millennium Indian steel industry took a turnaround. By 2002, a turnaround appeared to be on the horizon through the holding units of the SAIL and domestic demand for steel increased by 5.7 percent.

Even in the sluggish economic environment Indian steel industry showed a positive growth following the strong domestic demand from the infrastructure sector, automobile and construction sectors. When other Asian countries like Japan and South Korea experienced a noticeable decline in their production levels, In India, the production of crude steel on the year-on-year basis was 2.7% in 2009 and reached 56.6 Million Metric Tons.

Financial distress

Risk and uncertainty always follow the path of financial

performance of a business unit and risk can overtake a production unit in any stage of growth cycle of a product if there is lack of awareness on the part of management of finance. A company may go bankrupt, insolvent or financially distressed. Financial distress of a business unit is its inability to meet its liabilities; the business unit comes to an exhausting end of finance and becomes handicapped for discharging its duties to pay back its loan burden. In other words, financial distress may be cash shortage on the assets side in the balance sheet, or a debt overhang in liabilities. If a company runs in bankruptcy for two to five years, the problem of finance becomes reflective in the strategic level leading to the operational level and enters in financial distress.

Financial distress is a negative connotation, which is used to describe the performance of the financial management, when a company lacks of liquidity and fail in fulfilling financial obligations to its counterparts such as banks, sundry creditors, labour and payment of overheads. Apart from this a firm does need funds for its daily operational concerns. Therefore working capital cycle becomes so significant for the financial management of a company. Usually a shift in liquidity in a company is considered as the beginning of distress, though a reduction of liquid resources does not necessarily mean a negative image regarding the firm's solvency position.

When a company enters in the first phase of decline of financial performance, it may have creditors to pull it up back on the track of profitability without much pain and pressures of external environmental factors. In case of economic failure and technically insolvency, it may go for merger or may seek the help of BIFR (Board for Industrial and Financial Reconstruction) and can have another chance to revive and restore its profitable position. Financial restructuring is linked with the capital structure and dividend policy of a firm. The decision regarding the capital structure of a firm is its financial decision about the selection of the source of finance which gives it leverage. Similarly in case of defaults on its debt with the decision of non-liquidation, it can go through the legal process of bankruptcy; otherwise, financial restructuring may be undertaken out of court.

Thus the distance between a normal profits earning company to financially distressed is covered in four steps, i.e.

a) deterioration of performance

- a) failure,
- b) insolvency,
- c) and default.

Literature Review

The performance of the financial management of Indian steel industry has been a serious concern as it affects the infrastructure sector, i.e. the backbone of any economy. The problem of financial distress appears in phases as it begins with a drop in sales, change in operating income leading to a negative stock returns depicting the deterioration of performance. Deterioration in the performance may be the consequence of internal affairs or external affairs, which is difficult to be fixed. This is why researchers observe and study the endogenous and exogenous determinants and frequently combine both accounting and market-based determinants for the identification of financial distress in a model.

At first, Beaver (1966) pointed out financial distress indicating its different forms of appearance, viz. bankruptcy, bond default, an overdrawn bank account, or nonpayment of a preferred stock dividend (the operational form of financial distress). Gordon (1971) highlighted that the corporation enters this state when it becomes unable to generate earnings and the amount of debt exceeds the value of the company's total assets, which means yields of bonds becomes lower than the risk free interest rate and firm faces significant difficulties in obtaining additional external financing.

Miller (1977) demonstrated two syndrome; the first syndrome, when a company does not recognize the change in the upward trend of overall economic development due to overambitious management, incautious expansion strategies. So if the diversity in the firm's markets grows faster than the information system of the company, the firm is unable to anticipate changing conditions and properly adjust its growth strategy. In the second syndrome managers overestimate the stability of the current economic situation and only convinced of the results of past pursuing strategy and disregard a sudden change of economic conditions, which can turn success into failure.

Edmister (1970) and Thomas and Evanson (1987) stressed that the aim of business should be of earning profit not mere the generation of sales. Low profitability means under-capitalization

and loss of cushion to cross the unfriendly jerks of the instable market. Thus a firm needs to ensure optimum arrangement, allocation and control over its financial decisions for present as well as future gain; otherwise it is bound to have financial distress incurring higher costs, more expensive financing and opportunity costs of projects and loss in productivity. Short term financing decisions are a part of the working capital for day-to-day needs, i.e. inventories, debtors, cash and short term liabilities. Smith (1980) opined that management of working capital management affects the profitability of a firm, its value and the risks. When current liabilities rise higher to current assets means loss of profitability pushing a firm into financial distress.

Denis and Denis (1990) found that a company usually experiences cash flow problems and is unable to pay dividends when it enters into financial distress. Gilbert et al. (1990) added that financial distress has feature of negative cumulative earnings over at least a few consecutive years, losses, and poor performance and bankruptcy is one of the possible outcomes of financial distress. Hopwood et al. (1993) opined that bankruptcy without preceding financial distress is driven rather by management fraud than by a natural stressed situation.

Asquith et al. (1994) defined financial distress on the basis of interest coverage ratio. They classified firm as distressed if in any of two consecutive years of theirs EBITDA is lower than 80% of the firm's interest expense. In the same year Opler and Titman (1994) identified distress companies by using the median sales growth and the median stock return. They stated that a negative stock returns (a fall below -30%) indicate the unexpected character of adverse processes running in the company, which is accompanied by a negative growth in sales, negative stock returns signaling the existence of hidden operational problems of the company in its daily business. They understood the significance of these indicators because they are crucial during economic downturns as they reflect the efficient operational structure of the company and its dependence on investor sentiments, along with the situation of competitors and its impact on general conditions of the industry.

Andrade and Kaplan (1998) identified two forms of financial distress, i.e. the first one is default on a debt payment, and the second one is an attempt to restructure the debt in order to prevent the default situation. Whitaker (1999) considered the

measure of cash flow and market value of the company to identify financial distress. Altman and Hotchkiss (2005) used economic criteria to define failure and found that during financial distress, the financial ratios of the company reflect insufficient revenues to cover costs, and the average return on investment (ROI) lies far below the cost of capital.

The failures of large joint stock companies in the U.S. and Europe such as Philipp Holzmann, Enron, WorldCom, Swissair, ABB, Parmalat have given a shock to the investors across the globe that size of a firm does not protect it from default. Similar to Gilbert et al. (1990), Purnanandam (2005) developed a theoretical model of corporate risk management in the presence of financial distress costs and considered financial distress as an intermediate state between solvency and insolvency. Bardia S. C. (2006) examined significant differences between actual and estimated values of working capital, current assets and current liabilities of TISCO and SAIL and indicated the inefficient liquidity management of public sector units. Kamlendu Bhunia (2007) found that working capital and receivable management were inefficient in SAIL and IISCO and SAIL had inefficient inventory management.

A firm's operating performance depends on certain key financial factors viz., turnover, profit, asset utilization etc and the variables which are found in profit and loss account and balance sheet of a firm have a direct or indirect relation with each other. By establishing a close relationship between the variables through ratio analysis, a firm can analyze its financial performance in terms of liquidity, profitability, viability and sustainability. M.S. Ramaratnam, R.Jayaraman (2010) reviewed financial soundness of a firm by way of applying Altman's Z – Score in the select companies of Indian steel industry. Altman's Z – Score is regarded as an effective indication of corporate performance in predicting financial soundness of a firm.

Specific to the steel industry of India the study of Dr. Amalendu Bhunia, Mr. Amit Das (2012) examined the relationship between the working capital management and profitability of Indian private sector small-medium steel companies on the basis of the data obtained from CMIE database for the period from 2003 to 2010 and molded a linear regression system in multiple correlation and regression analysis. They showed a small relationship between working capital management including working capital cycle and

profitability and through multiple regression tests they confirmed a lower degree of association between the working capital management and profitability.

In an empirical study was made by Dr. Kavita Chavali*; Ms. Karthika.S (2012) for twenty large and medium steel units for a sample period of 2001 - 2010 to understand the financial soundness of steel industry in India They also used Altman's Z-score model to monitor financial performance of the Steel industry and measured and analyzed the possibility of business failure with reasonable accuracy by using the z-score model. They found that the steel industry is in good financial performance inspite of the impact of sluggish demand and global economic slowdown.

Methodology

A lot has been said about Indian steel industry in India and abroad regarding its growth trend and the position of India has been established among the key producers of the world. This paper is an effort to assess the fact that whether the Indian steel industry is maintaining or able to maintain the pace of global key producers. This paper tries to assess the status of Indian steel industry on the basis of a study of financial management (specifically through liquidity status) of steel companies, growth of production of steel, domestic market status and finally its global status in the market.

In this paper I have studied a bunch of steel manufacturing companies to observe the changes in net profit of these companies since 1995 to 2010 to infer a trend, which depicts the real growth of Indian steel industry. For the purpose I have used secondary data from the published sources, i.e. annual reports of the steel companies and data available on websites. I have used data of steel companies from both the categories, primary producers viz. SAIL, TSL and secondary producers like JSWSL etc.. The study of net profit comprises the data of Jsw Steel Ltd, Jindal Saw Ltd, Lanco Ind. Ltd., Llyod Steel Ltd., Maharastr Electros melt Steel Ltd., Maharstra Seamless Ltd., Uttam Galva Steel Ltd., Usha Martin Ltd. for a period of twenty years, i.e. from the financial year 1991 to 2010. A study of liquidity carries the data of SAIL, JSWSL, JW&AL, & TSL from the financial year 2000 to 2009. Likewise the growth and production study contains the data from the financial year 1991

to 2008 and for the study of market aspect (such as production of alloy & non-alloy, market competitiveness etc.) data ranges between the financial year 2000 to 2011. This paper has tried to study global prices of steel, demand for and supply of finished steel as considering the objective of paper it becomes imperative due to the strategic importance of steel for the nation as a whole. This paper adopts a review approach and it tries to make a comparative observation on the basis of growth trend (national and global), demand (national and global).

The causes of financial distress and bankruptcy can be varied (systematic or unsystematic) when taking into consideration the instability or vulnerability, of the business environment in the

world economy. A study of Indian steel industry reveals the fact about its weaknesses and challenges, which indicate towards the threats to the industry. It has experienced a significant fluctuation in its profitability regardless of the kind of ownership, which points out the poor management of finance that cannot be ignored. Financial management has been key issues in both the sectors, private as well as public sector manufacturing units.

The following Table no.1 displays the net profit of secondary producers for a period of twenty years, i.e. from the financial year 1991 to 2010 which have registered a fluctuating distressful trend of profitability.

Table no.1: Net profit of steel companies of India

Year	Jsw Steel	Jindal	Lanco	Llyod Steel	Maharastr	Maharstra	Usha	Uttam
	Ltd	Saw Ltd	Ind. Ltd	Ltd	Electrosmelt Steel Ltd	Seamless Ltd.	Martin Ltd	Galva Steel Ltd
Mar-91				54.04	0	0	7.19	35.35
Mar-92		15.85		65.38	95.55	24.62	28.9	37.26
Mar-93		42.97		150.01	48.63	-24.47	134.95	72.61
Mar-94		66.2	0	228.56	-43.52	-2.55	172.73	94.82
Mar-95	0	267	3.88	457.93	-56.94	20.66	280.64	201.14
Mar-96	0	454.98	70.58	1,137.41	6.68	93.07	338.3	243.84
Mar-97	-8.44	400.36	57.72	69.24	-28.14	69.71	150.04	157.8
Mar-98	-347.73	346.25	9.36	-560.51	5.89	80.03	196.66	118.66
Mar-99	-223.77	229.45	8.08	-1,977.09	-112.91	103.63	300.63	13.11
Mar-00	-1,420.47	319.19	1.26	-2,653.24	-161.47	175.62	269.39	-338.38
1-Mar	-491.83	22.11	-84.3	-4,036.47	-162.25	305.58	269.83	-385.54
2-Mar	-3,440.41	273.46	-237.88	-2,428.99	-77.88	484.88	91.26	-208.36
3-Mar	936.7	443.14	-92.91	-2,335.56	17.44	521.68	67.56	216.43
4-Mar	1,028.50	749.88	252.4	-954.47	53.28	650.57	-75.2	477.09
5-Mar	8,408.00	555.51	210.67	510.83	506.69	782.36	561.25	762.84
6-Mar	4,387.60	913.99	38.74	-1,249.99	209.97	1,379.52	692.02	724.2
7-Mar	11,897.20	1,542.60	141.85	-636.77	178.82	2,333.91	881.79	1,191.10
8-Mar	16,390.50	2,788.04	225.84	-818.82	361.62	2,140.17	1,152.66	977.5
9-Mar	10,757.00	3,391.52	253.23	-2,319.02	416.43	2,378.68	2,191.65	1,302.70
10-Mar	15,132.70	8,354.49	560.08	-581.12	434.03	2,604.41	328.22	1,286.60

The fluctuation of steel manufacturing units has been projected graphically, which indicates that till 2004 almost all companies have suffered the state of financial distress. Even after 2004 except JSW Steel Ltd. no one could revive its profitable position till 2005. Maharashtra Seamless shows a trailing condition, the

net profit of Usha Martin rose from 2005 onward and again fell to touch the zero line in the financial year 2010. Net profit of Maharashtra Electros melt continued to follow zero line, whereas profitability of Jindal Saw Ltd stood straight lately, i.e. since 2009.

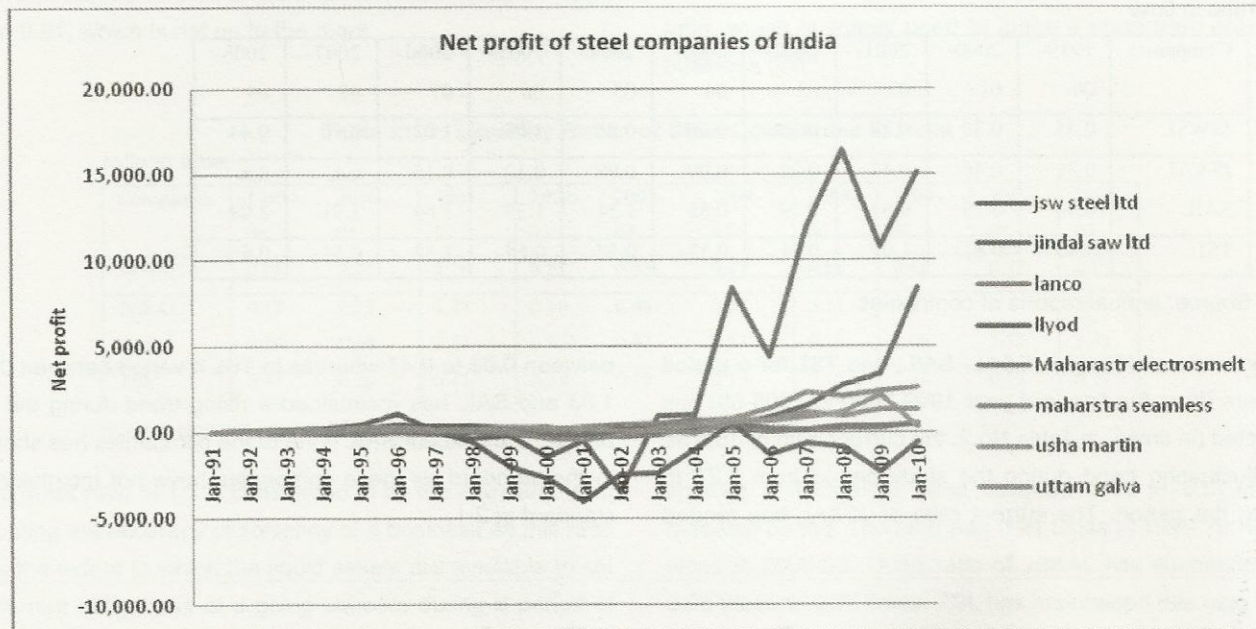


Figure no. 1: Net Profit of steel companies of India

It means on the basis of above graph the period after economic reform till the financial year 2010 has not been fortunate for these steel manufacturing companies, which gives a strong notion to rethink about the promising growth of Indian steel industry.

Assessment of adequacy of working capital of Steel Industry

Deterioration of performance of steel industry means deterioration in the efficiency of financial management leading to failure affecting the profitability of the company, which subsequently follows insolvency and default in its liquidity. Basically financial distress is characterized by a sharp decline in the firm's performance and value. The life of insolvency is determined by the maturity structure of the firm's debt. The biggest challenge in financial distress is to recognize adverse processes as early as possible in order to gain more time for response. An assessment of the liquidity position through relative data of steel manufacturing units, viz. JSWSL, JS&AL, SAIL and TSL has been

made from the financial year 1999-2000 to 2008-09.

Liquidity Position based on Current Ratio (CR)

Most of the companies enter financial distress as a result of bad performance or adverse economic conditions, or both, which can be described as endogenous or exogenous variables either caused by internal environment of a company or affected by the elements of macro business environment. The situation of the financial distress can be broken down into four sub-stages; i.e. performance decline of the company, its economic failure, its technical insolvency, and its defaulting feature.

Indian steel industry has another facet too, which displays a disappointing image of steel industry as many of the manufacturing units underwent the situation of a financially distressed industry prior to 2002, especially, when SAIL underwent this experience prior to its turnaround in the financial year 2003-04.

In the study of relative data current ratio is most widely used ratio to analyze short-term liquidity of firm as it is a measure of general liquidity. A relatively high current ratio indicates the sound liquidity status of a firm and its ability to pay the current obligation. That is

why it is also known as current assets and current liabilities ratio solvency ratio. An assessment of the current ratio of the industry has been shown in the following table no. 2:

Table no. 2 : Current Ratio* of steel companies in INDIA (FROM 2000 TO 2009)

*ratio in time

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	0.35	0.39	0.27	0.35	0.75	0.95	1.08	1.02	0.70	0.44
JS&AL	0.39	0.46	0.47	0.22	0.09	0.08	0.12	0.15	n.a.	n.a.
SAIL	0.84	0.79	0.63	0.79	0.85	1.34	1.37	1.64	1.91	2.08
TSL	0.83	0.81	1.01	0.71	0.53	0.57	0.65	1.63	0.51	0.66

Source: annual reports of companies

The Current ratio of JSWSL, JS&AL, SAIL, and TSL for a period of nine years (form the financial year 1999-2000 to 2008-09) has been depicted (in times) in Table No.2, the current ratio of JSWSL shows a fluctuating trend during the study period from 0.27 to 1.08 during the period. The current ratio of JS&AL has ranged

between 0.08 to 0.47 whereas in TSL it varied between 0.53 to 1.63 and SAIL has maintained a rising trend during the study period. Thus except SAIL none of the companies has shown up to the standard as these companies have not maintained the standard of 2:1.

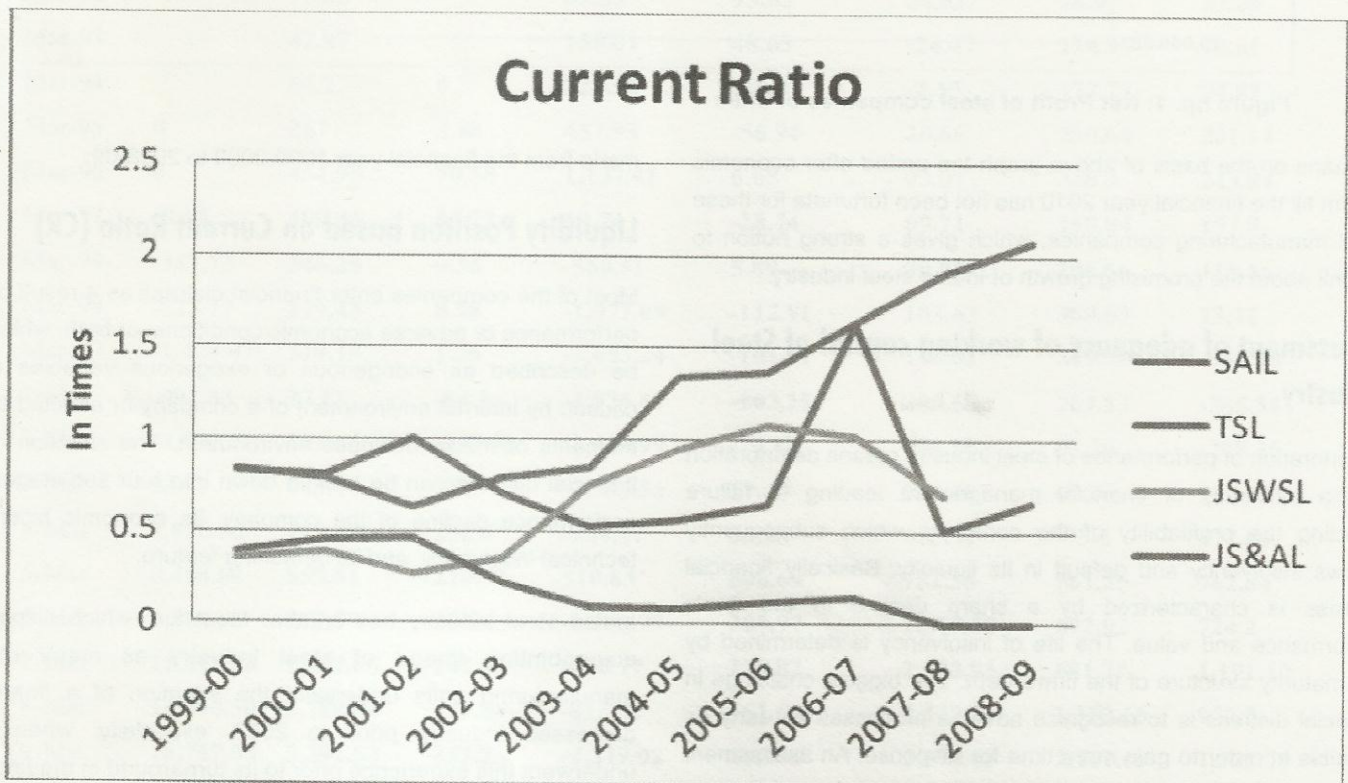


Figure no. 2: Current Ratio of the steel companies

The above table depicts a progressive but fluctuating trend in JSWSL, i.e. from 0.27 to 1.08 times during 2002 to 2006, which has 0.82 as an average ratio. In JS&AL it had been between 0.47 to 0.08 during 2002 to 2005. The steel giant SAIL has fluctuated between 0.63 to 2.08 times during 2002 to 2009 whereas in TSL it was 0.83 in 2000 and 0.66 times in 2009 and industry average had been 0.81, which is not up to the mark.

Liquidity Position based on Liquid Ratio (LR)

Liquidity ratio is a more rigorous test of liquidity in comparison of current ratio. A company with a high liquidity ratio resembles a sound state of liquidity and ability to meet its current liabilities in time and vice-versa. This ratio is also called acid test or quick ratio, which is widely used to judge a short-term solvency of a business unit.

Table no.3: Liquidity Ratio* of Steel Companies in India

ratio in time

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	0.21	0.25	0.16	0.21	0.53	0.47	0.57	0.46	0.22	0.13
JS&AL	0.17	0.25	0.27	0.10	0.06	0.07	0.11	0.13	N a	N a
SAIL	0.29	0.30	0.22	0.32	0.47	0.83	0.78	1.05	1.35	1.43
TSL	0.37	0.36	0.43	0.28	0.19	0.15	0.15	1.23	0.12	0.27

Soure: annual report of companies

Usually a quick ratio of 1:1 is considered to be the standard norm for evaluating the accuracy of solvency of a business as this ratio specifies the extent to which the liquid assets are available to set off the current obligations of a going concern during a period of time. The above Table no.3 presents liquid ratio of the steel companies during the study period. The quick ratio of JSWSL has

showed a fluctuating trend between 0.13 to 0.57 during the research period. The ratio was 0.21 times in 1999-2000 and 0.13 times in 2008-09. Quick ratio of JS&AL has fluctuated between 0.06 times to 0.27 times. TSL has maintained this ratio from 0.12 times to 0.37 times. Again only SAIL showed a rising trend i.e. 0.22 to 1.23 and rest of the companies showed a decreasing trend during study period.

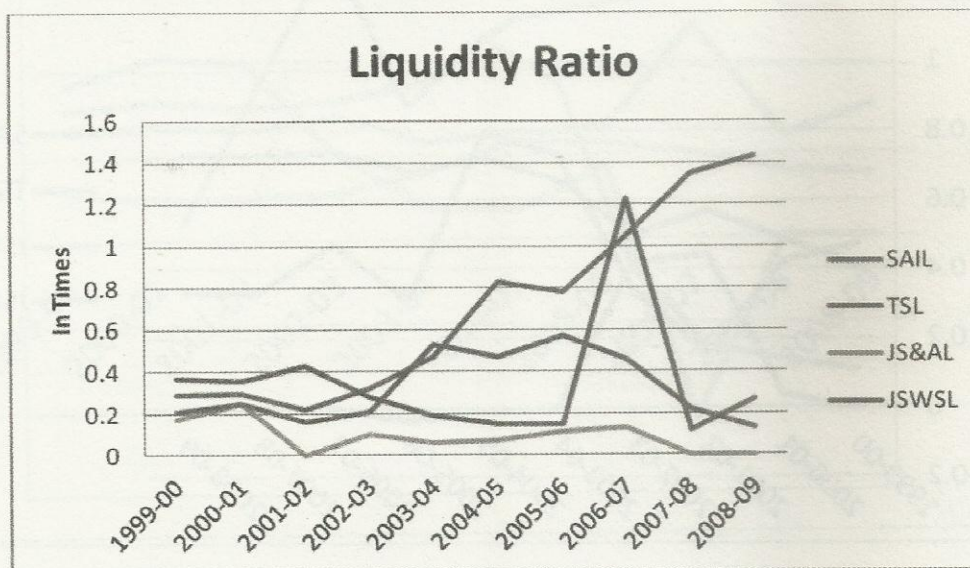


Figure no. 3: Liquidity Ratio of the steel companies

The trend of liquidity ratio has been reflected through the above graph'

Absolute Liquidity Ratio

Absolute liquidity ratio is known as super quick ratio or cash position ratio as it establishes a relationship between absolute liquid assets and current liabilities, Thus it carries two components of this ratio, i.e. Absolute liquid assets (marketable

securities, cash in hand and bank balance) and current liabilities. This ratio examines absolute liquid position of a firm such as if this ratio is 1:1 it means that the firm has sufficient cash to pay to its creditors and the firm is avoiding the use of short-term loan from bank. The following Table 4 shows the status of Absolute Liquidity ratio of selected steel companies during the study period.

Table no.4: Absolute Liquidity Ratio of Steel Industry in India
*ratio in times

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	0.11	0.14	0.18	0.41	0.94	1.07	0.87	1.32	0.93	0.53
JS&AL	0.00	0.04	0.44	0.42	0.00	-0.01	-0.04	0.00	n.a	n.a
SAIL	0.47	0.42	0.16	0.34	0.73	0.79	0.31	0.47	0.33	0.33
TSL	0.41	0.49	0.57	0.50	0.66	0.72	0.68	0.74	0.73	0.73

Source: annual report of companies

The absolute liquidity ratio JSWSL showed fluctuating trend between 0.11 to 1.32 in 2006-07, JS&AL has absolute liquidity ratio fluctuated between -0.04 to 0.44, The ratio of SAIL has

fluctuated between 0.16 to 0.79. The ratio of TSL was showing fluctuating trend throughout the study period between 0.41 to 0.74.

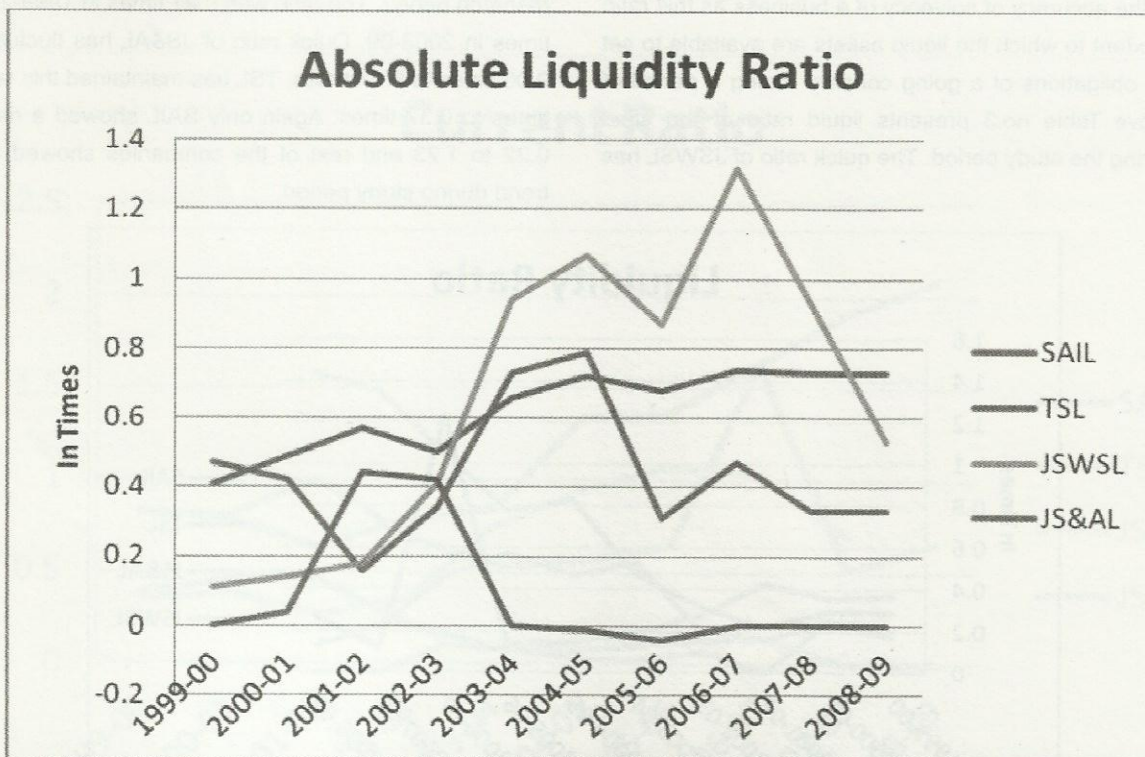


Figure no. 4: Absolute Liquidity Ratio of the steel companies

The above figure no.4 shows the absolute liquidity ratio of steel companies, JS&AL has fluctuated below 0.

Current Assets to total Asset Ratio

Current asset to total asset ratio indicates the share of current asset in the total assets of a company. A higher current asset ratio

shows liquidity strength of the company. This ratio includes two components, i.e. current Assets and total asset. The following table no. 5 indicates the current asset to total asset ratio of the companies:

Table no.5: Current Assets to total Asset Ratio* of steel Industry in India

*ratio in times

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	0.11	0.10	0.10	0.11	0.16	0.23	0.23	0.20	0.16	0.15
JS&AL	0.37	0.43	0.42	0.20	0.08	0.07	0.17	-0.42	n.a.	n.a.
SAIL	0.31	0.33	0.31	0.33	0.37	0.52	0.55	0.61	0.65	0.64
TSL	0.26	0.27	0.26	0.29	0.23	0.25	0.26	0.50	0.24	0.31

Source: Annual reports of Companies

It is evident from the above table that the current assets to total assets ratio of JSWSL, JS&AL, SAIL and TSL has shown a fluctuating trend during the study period. The percentage to

current assets to total assets was the highest to 0.23 in JSWSL during 2004-05 and highest 0.43 in JS&AL in 2000-01. The ratio of SAIL has been 0.31 in 2001-02, and in TSL it was 0.23 during 2003-04.

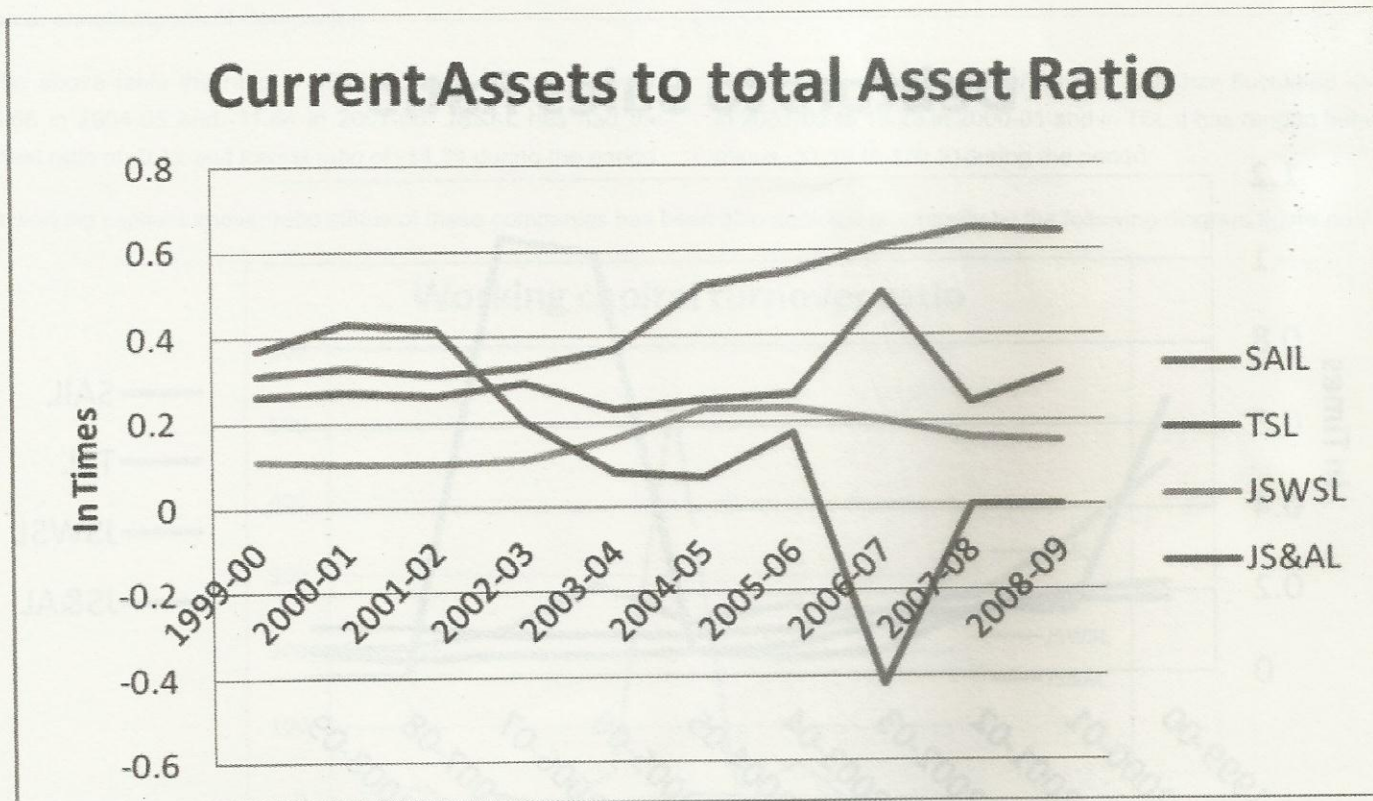


Figure no. 5: Current Assets to total Asset Ratio of the steel companies

The miserable current assets to total asset ratio of JS&AL in comparison to other companies is explicitly visible in the above graph.

Debtors to Sales Ratio

Debtors to sales ratio analyze the level of the investment in debtors. This ratio indicates importance of credit policy by a firm.

A higher the ratio, the higher credit investment and a lower ratio points out a strict credit and collection policy of a company, resulting in effective management control.

Table no.6: Debtors to Sales Ratio* of Steel industry in India

*ratio in times

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	0.51	0.33	0.19	0.15	0.17	0.13	0.22	0.11	0.07	0.07
JS&AL	0.66	0.15	0.16	0.06	0.04	0.06	1.02	1.06	n.a.	n.a.
SAIL	0.18	0.18	0.15	0.15	0.11	0.10	0.10	0.10	0.12	0.12
TSL	0.22	0.20	0.15	0.12	0.07	0.06	0.05	0.05	0.04	0.06

Source: annual reports of Companies

The above table no.6 shows a trend of declining ratio in all the companies, which means they have had a strict credit and

The above table no.6 shows a trend of declining ratio in all the companies, which means they have had a strict credit and

Debtors to Sales Ratio

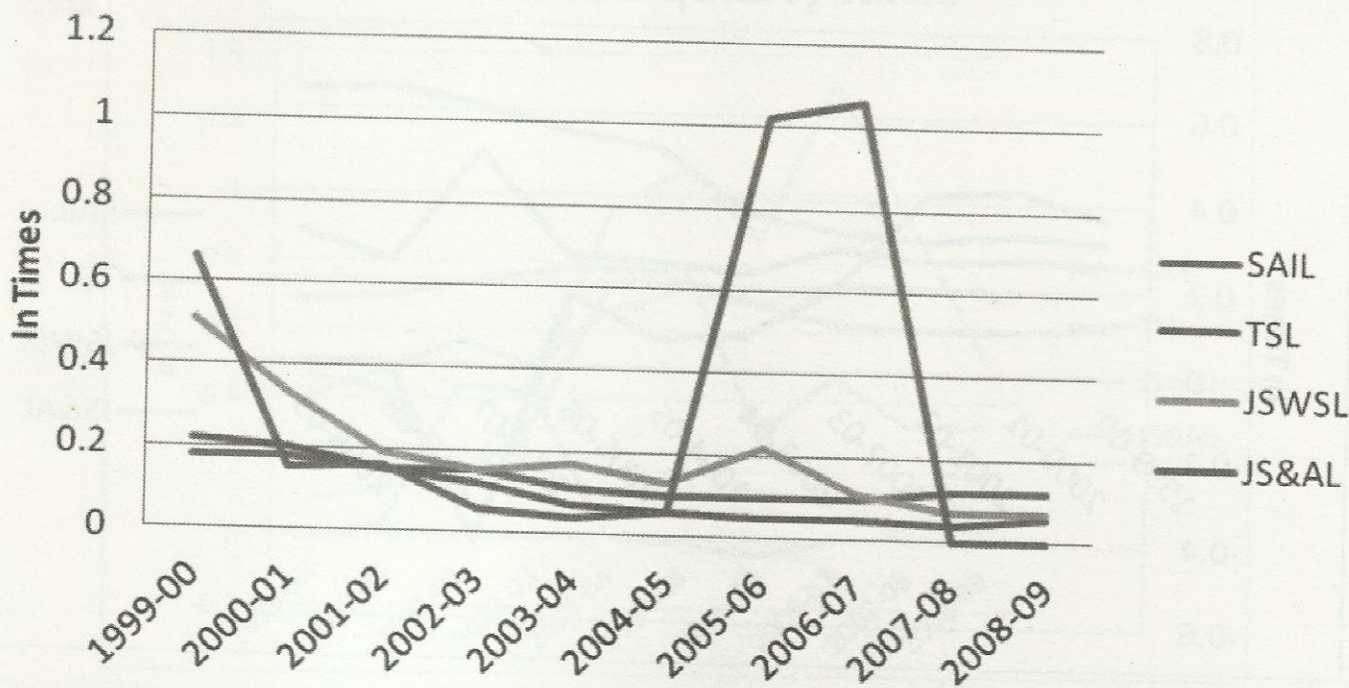


Figure no. 6: Debtors to Sales Ratio of the steel companies

Working capital turnover ratio

Working capital turnover ratio is calculated in order to test the efficiency of a firm. This ratio is computed on dividing the amount of sales by net working capital. There is a close relation between sales of a company and its net working capital. With every increase in sales volume there is a corresponding increase in the working capital. Thus this ratio helps to assess the degree of efficiency in the use of short term funds for generating sales. It

also reveals that whether a firm is being operated with a small or large amount of net working capital in relation to its sales. A very low ratio may be the outcome of an excess of working capital, slow turnover of inventories and receivables, large cash balance or investment of working capital in the form of temporary investments. A very low ratio also indicates an under trading which means the company has invested more working capital funds than needed. The following Table displays the working capital turnover ratio of the selected steel companies from 1999-2000 to 2008-09.

Table no.7: Working capital turnover ratio* of steel companies in India

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	-1.31	-1.98	-2.18	-5.09	38.49	535.86	16.15	51.89	-11.84	-4.08
JS&AL	-1.42	-14.34	-6.93	-2.84	-1.65	-1.42	-0.12	-0.14	n.a.	n.a.
SAIL	10.62	18.23	-34.62	-22.80	-13.43	10.53	8.61	5.11	3.87	3.06
TSL	170.91	-31.19	13.63	-8.93	-6.06	-7.07	-9.24	4.50	-5.73	-7.84

Source: annual reports of Companies

In the above table the ratio of JSWSL has fluctuated between 535.86 in 2004-05 and -11.84 in 2007-08. JS&AL has had the highest ratio of -0.12 and lowest ratio of -14.34 during the period.

The working capital turnover ratio of SAIL has fluctuated -34.62 in 2001-02 to 18.23 in 2000-01 and in TSL it has ranged between minus -31.19 to 170.91 during the period.

The working capital turnover ratio status of these companies has been also depicted graphically by the following diagram figure no.7:

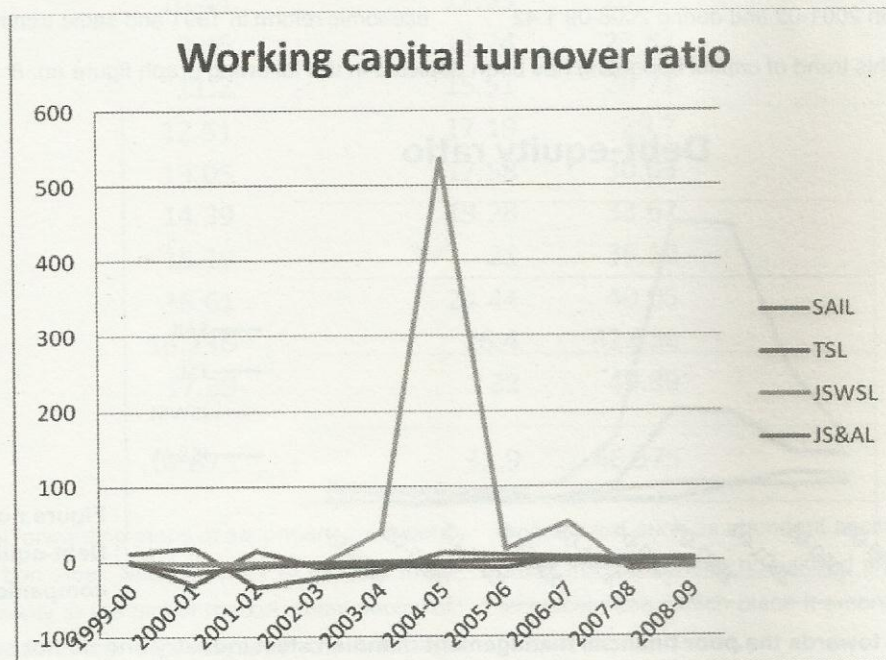


Figure no. 7: Working Capital Turnover Ratio of the steel companies

Debt-equity ratio

Debt-equity ratio is calculated on dividing total debt of a business by its net worth. It shows a relationship between external equities i.e. the total outside liabilities and internal equities i.e. the shareholder's funds or the tangible net worth, that is why this ratio is also called 'External-Internal Ratio' and 'Net Worth to Total Indebtness Ratio'. This ratio indicates soundness of debt equity mix by measuring the amount of long-term obligations in relation to the amount contributed by owners or the extent to which debt financing used by a firm. Generally the loans and the borrowings should not exceed the net worth and the ratio of 1:1 is considered

ideal and same has been followed by the public sector manufacturing units of India. A proper mix of debt and equity helps in improving the rate of capital formation.

A high ratio indicates claims of creditors as compared to owner's funds and vice-versa. Creditors always prefer a low debt equity ratio because for the lower the ratio there would be a larger amount contributed by owners and greater stock of security to the creditors. But shareholders favor higher ratio to derive optimum benefit from the assets provided by creditors through leverage. The following Table presents debt equity ratio of the steel companies:

Table no.8: Debt-equity ratio* of steel industry
*ratio in times

Companies	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
JSWSL	4.11	8.9	18.55	18.83	4.38	1.27	1.01	0.77	0.98	1.42
JS&AL	1.84	2	1.11	0.29	0.27	0.24	0.74	-0.12	n.a.	n.a.
SAIL	3.12	3.34	6.02	6.23	1.27	0.5	0.27	0.19	0.09	0.24
TSL	1.33	1.18	1.37	1.33	0.78	0.4	0.26	0.71	0.66	0.9

Source: annual reports of Companies

The debt equity ratio of JSWSL shows a fluctuating trend as it increased from 4.11 times in 1999-2000 to 8.9 times in 2000-01 and reached to 18.55 times in 2001-02 and during 2008-09 1.42

times. For JS&AL it has been between -0.12 to 1.84 times while SAIL has shown a declining ratio depicting the new directives of economic reform in 1991 and same tren has been followed by TSL.

This trend of capital budgeting has been depicted in the following graph figure no. 8:

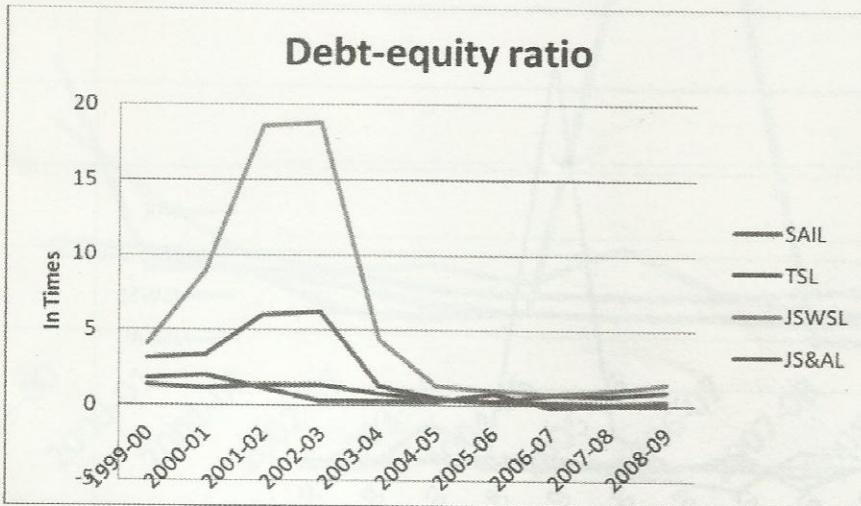


Figure no. 8 :
Debt-equity Ratio of the steel companies

The above ratio indicates towards the poor financial management of Indian steel industry and do not support the forecasting future of this industry.

Production of Steel Industry in India

Indian steel industry

India has emerged as the fifth largest producers of steel in the world. The steel industry of India is comprised of steel manufacturing units of public and private nature of ownership. The public sector manufacturing units rules the steel market internationally whereas private sector plays the role of a supporting partner rather than a competitor through its billions dollars investments in the sector. On the basis of route there are primary producers like SAIL, and TISCO (integrated, who convert iron ore into steel) and secondary producers like ESSAR steel

Ltd, Llyod steel Ltd etc (non integrated, who melt scrap, sponge iron or mix of both to make steel). During independence total production was only a million tonnes, by 1991 it grew to 14 million tones, which was doubled after a decade and in this year it is expected to reach 124 million tonnes. The total volume produced by India at the end of December 2010 was 75.463 MTPA.

Supply aspects of Steel industry

The Table no.9, ahead depicts the contribution of integrated / primary producers and non-integrated/secondary producers in the production of carbon steel since 1991 to 2008.

Table no.9: Production of finished carbon steel (In million tonne)

Production of finished carbon steel(In million tonne)

Year	Main producers	Secondary producers	Grand Total	% of share of Secondary producers
1991-92	7.96	6.37	14.33	14.50%
1992-93	8.41	6.79	15.2	44.70%
1993-94	8.77	6.43	15.2	42.30%
1994-95	9.57	8.25	17.82	46.30%
1995-96	10.59	10.81	21.4	50.60%
1996-97	10.54	12.18	22.72	53.60%
1997-98	10.44	12.93	23.37	55.32%
1998-99	9.86	13.24	23.82	57.32
1999-00	11.2	15.51	26.71	58.07%
2000-01	12.51	17.19	29.7	57.88%
2001-02	13.05	17.58	30.63	57.40%
2002-03	14.39	19.28	33.67	57.27%
2003-04	15.19	21	36.19	58.03%
2004-05	15.61	24.44	40.05	61.02%
2005-06	16.236	26.4	42.636	61.92%
2006-07	17.39	32	49.39	64.79%
2007-08(Apr-Jan08)	14.675	31.9	46.575	68.49%

The table shows gradual forwarding steps of secondary producers in the production of carbon steel. Steel industry of modern India has gained lots of popularity in the global market. Steel sector of India is blessed with the natural advantages of the business

environment such as abundant availability of raw material i.e. high grade Iron ore, cheap non-skilled and skilled labour, and required technical base, which place it among the emerging world leaders of steel manufacturers.

About Indian steel industry it is said that they are blessed as they have easy access to the cheaper raw material and cheaper labour. It would be better if we consider the quality perspective rather than quantitative perspective; viz. high ash content is present in abundantly available indigenous coking coal, which shows negative impact on the productive efficiency of iron manufacturing units. This is why we have to pay the price for import. Apart from this the supply of other key ingredients of steel production like nickel, ferromolybdenum is insufficient and we have to depend on import. Although raw material is not the only input, which an industry needs to produce goods, but these are labour, capital, which have a significant bearing on the total production cost and productivity of a manufacturing unit.

Labour is the only active factor in any economic activity, thus one can easily appreciate the significance of the productivity of this factor in a production unit. Cheap Indian labour suffer with the problem of low productivity, which is reflected in total production.

Demand aspects of Steel industry

Prosperity and growth of any industry begins from its very root and if we focus on the domestic demand then the dream of India to become a global leader seems very far. Let us compare the per capita consumption of steel in India, which is 39 kgs. per head against the global average per capita consumption of 150 kgs.. No doubt India has a long way to go to match the global standard of steel consumption. Stagnancy in demand in the presence of domestic oversupply naturally follow market rule of equilibrium and bring the price lower. Indian steel industry is facing the truth of economic principle.

Indian steel industry presents a pathetic picture, when we realise that its growth has been basically stimulated by overseas demand, and the profitability of Indian steel industry is export depended followed by a high global prices. We have proof of it the trend of Indian steel industry has shown a noteworthy growth during 2002-03 and in few succeeding years as in 2002-03 export of finished Indian steel increased by 36% in comparison of 6% of domestic demand in the same period.

There is a hope of prosperous future of Indian steel industry, i.e. revival of the economy and infrastructural expansion all over the country, such as roads expansion, railway, bridges, automobiles, and real estate etc. Steel industry of India needs impetus to grow up following the economic policy of the government regarding planned expenditure. Steel flat is mostly used in construction, shipbuilding, pipes and boiler applications. Steel long Category includes steel products in long, bar or rod shape like reinforced rods made of sponge iron. The steel long products are required to produce concrete, blocks, bars, tools, gears and engineering products. There is a need of stimulation by increasing domestic demand of household along with the industrial demand to boost up the growth of Indian steel industry. It needs drivers and concomitant of domestic demand. Forecasting of becoming world leader could be true only if Indian steel industry has a strong back up of increasing per capita consumption of steel and no doubt this sphere has a wider scope as still India's per head consumption of 35kg is much lower than the China's 250 kg and global 150 kg per capita consumption. The following table depicts the fact:

Table no.10: Demand and Growth of Steel Industry

YEAR	DEMAND(in mt)	GROWTH IN %
2000-2001	34.444	
2001-2002	36.037	4.625
2002-2003	40.471	12.32
2003-2004	43.062	6.4
2004-2005	45.387	5.4
2005-2006	50.257	10.73
2006-2007	58.45	16.3

Status of Indian Steel Industry in international market

Comparative Production cost

Marketing advantages of steel industry of India can be counted on its cost advantages and the following high potential growth in the domestic demand. According to the information of World Steel Dynamics, Indian steel industry stands well on its cost competitiveness as followed by the table:

Table no.11: Comparative Production cost per metric tonne in India

Name of Countries	Production cost/metric tonne
USA	\$510
Japan	\$550
Germany	\$557
Canada	\$493
India	\$497

As per the forecasting of economic growth Indian economy is going to be one of the leading countries by the year 2025. Thus the expectation of the rise in domestic demand from 34.5 million tonnes to 100 million tonnes by 2025 is no doubt may catch up with the production level of the developed countries.

But this is one sided picture of the global market, Present situation of global overcapacity and dumping law has hit the steel industry of India very hard. In one hand it has invited global slowdown for demand of steel leading to a historically low price for steel and on the other it has risked to financial distress and rendered them insolvent. For Indian steel industry it has multiplied their problem as due to slowdown of Indian economy industry is facing a long term downward pressure and manufacturers are unable to sell their product at the profitable price.

Besides this European euro zone crisis and slow growth of US economy has worsened the situation of Indian steel industry. Global poor demand for steel does not see any recovery in its price as steel industry is facing a poor demand outlook of global players coupled with low international price. Moreover antidumping duties, which US and many other European countries imposed on Indian steel has affected net export condition and created an imbalance in demand supply of steel

industries. Thus the combined impact of this international business environment is that, that Indian steel industry becomes an easy prey of financial risk and distress.

About the Indian steel industry it is commonly stated phrase that they fail to withstand economic downturns due to their inflexible financial profile. If we mention the problem of Public Sector Units, which is a parliamentary concern and happened to be vital part of protectionist industrial policy, since 1991 which has been left alone to face the harshness of ever changing business environment. So PSUs are not an exception of this financial distress and this has been giving a constant shock to the investors inside the country and across the globe. It would not be an exaggeration if we call this economic problem as an infectious disease, which has invariably visited the doors of small, medium and big manufacturing units be it domestic or global.

Global demand for steel and its corresponding supply may help to understand the scope of production growth of Indian steel industry. Let us consider the following graph

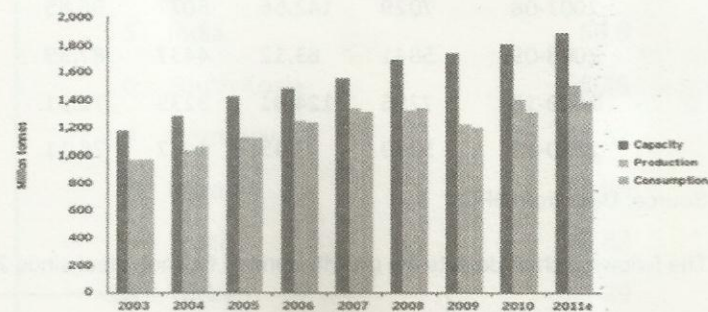


Figure no. 9: Global Steel Capacity vs. Supply Vs. Demand

The above graph shows the production capacity, actual production and consumption of steel for a period from 2003 to 2011 (data of 2011 is estimated one) in global market. According to it steel industry has been producing less than its production capacity. The years 2003 and 2005 have experienced equilibrium in the global market. The year 2004 supply has fell short to match the global demand of steel, which could be credited as one of the major reason of the improvement in the profitability of Indian steel industry.

No doubt the place of India comes among one of the few countries steel producing country which has shown a rapid growth as India's share in world production of crude steel

increased from 1.5% in 1981 to 3.5 % in 2004. But it would be over appreciation about the status of Indian steel industry. Though cases of plant closures are rare in private sector and this sector is being considered the engine of growth in the steel industry due to its rapid venture in technological modernization changes.

A comparison of past ten years production of India's crude steel indicates a growth of around 7% per year to 55.3 million tons whereas growth of global crude steel product had been 4%. But still India with her eighth position and share of around 3% among the world largest steel producer is much behind than other topper producers in the global ranking. In 2005 crude steel production in India went 46.5 million tonne and growth of 8% did follow the

15% growth of China. The beginning of 2006 was shiny for Indian steel industry as its production increased even 10% on year on year basis but it could not sustain in later months of the year and afterwards. India is one of the few countries where the steel industry is poised for rapid growth.

If we consider the following table, which displays export and import of total finished alloy and non alloy, we would realize that the fact of Indian steel industry. In international trade share of import of finished steel has reduced but export also follow a declining trend and so on production and consumption, which cannot be considered as an appreciating effort.

Table no.12: Total Finished Steel (Alloy and Non-Alloy)

Year	import	% growth	Export	% growth	Production	% growth	consumption	% growth
2005-06	4305	0	4801	0	46566	0	41433	0
2006-07	4927	114.45	5242	109.19	52529	112.81	46783	112.91
2007-08	7029	142.66	5077	96.85	56075	106.75	52125	111.42
2008-09	5841	83.12	4437	87.39	57164	101.94	52351	100.43
2009-10	7296	124.91	3235	72.91	60892	106.52	57675	110.17
2010-11	5359	73.45	2462	76.11	47296	77.6719	44275	76.77

Source: Data from JPC

The following chart depicts the growth trend of finished steel since 2005-06 to 2010-11. It is clearly visible that consumption is falling faster.

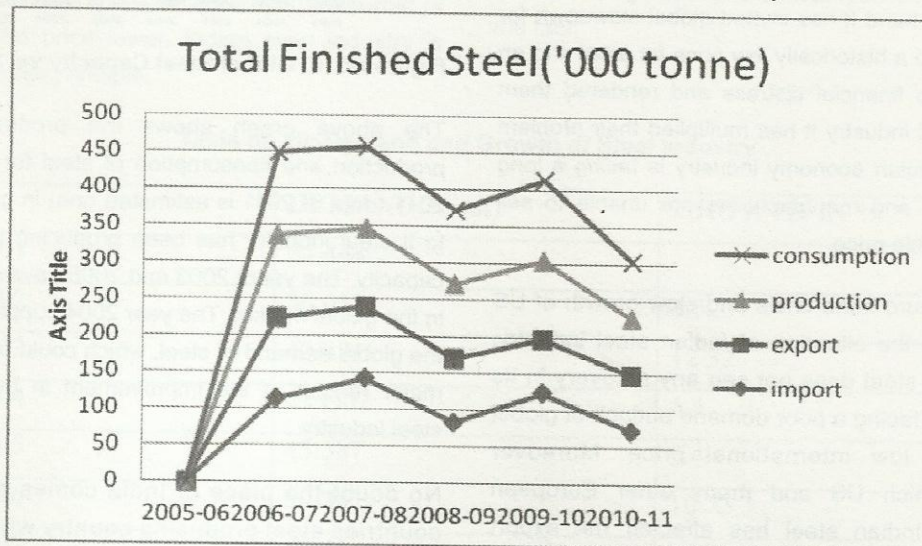


Figure no.10: Trend of Production, Consumption, Import and Export of Finished Steel in India

Also following the production growth rate of domestic crude steel of 8.4 per cent during 2005-06 to 2009-10, India was considered the 5th largest producer of crude steel in the world in 2010 by World Steel Association. That growth had been reflected through capacity expansion (from 47.99 million tonne in 2004-05 to 72.96 million tonne in 2009-10 and also an improvement in capacity utilisation. India. Future expectation sees, India as the second largest producer of steel in the world by 2015-16. But it could be possible only if all requirements for fresh capacity creation are met.

Country	Crude Steel Production (million tonne per annum)
CHINA	272.5
JAPAN	112.7
UNITED STATES	98.9
RUSSIA	65.6
SOUTH KOREA	47.5
F.R.GERMANY	46.4
UKRAINE	38.7
BRAZIL	32.9
INDIA	32.6
ITALY	28.4

Figure no.10 : Trend of Production, Consumption, Import and Export of Finished Steel in India

The above table indicates production of crude steel production during the financial year 2007-08, this was the period when Indian economy reached its peak growth as India touched double digit growth of around 9.75% in 2007. In that period the position of India in global platform remained 9th among the top ten world crude steel producer with a

production of 32.6 million tonne per annum while China stood 1st with a output 272.5 million tonne per annum, which was 8.36th time more than the production capacity of India.

But this sounds like a fad when we realise India accounts for less than 5% of the total global production of finished steel and just 1% of global trade. Nonetheless we have data as followed in the table no.1, which reflects a different picture, if we consider the rank of Indian steel industry among the world crude steel production in the year 2010:

Table no.14: A Comparative Crude Steel Production of India

Rank	Country	Production(MT)
1	China	626.56
2	Japan	109.6
3	USA	80.59
4	Russia	67
5	India	66.8
6	South Koria	58.45
7	Germany	43.82
8	Ukraine	33.56
9	Brazil	32.82
10	Turky	29

Table no.15: Comparative Productivity of Indian Steel Giants SAIL & TISCO

Sl no.	Production unit	Production capacity (tone/man year)
1	SAIL(India)	75
2	TISCO(India)	100
3	POSCO(Korea)	1345
4	NIPPON (Japan)	980

The above table states the miserable production efficiency of Indian labour as Korean labours are around 18 times more productive than an Indian labour employed by SAIL and Japanese labours are 13 times more productive. **Let us compare the price of capital in India with the one in USA and Japan.** In India rate of interest on borrowed capital is near 14% while in USA it is just 6% and Japanese pay only 2.4%. Similarly Indian producers incur 10 cents for electricity cost whereas a producer has to pay only 3 cents in USA. Japan and China buy steel from India and produce better quality cheaper products. Market condition for Indian companies is worsen by their inefficiencies and trade practices such as inferior product design, late delivery, service after sales, supply chain management, etc. all these factors by combining with each other multiply the plight of Indian steel industry in the international market drive them towards the market non-competitiveness

It means that Indian steel industry would have to struggle hard in future to supply to match the world demand for high-quality products. Thus future of export would depend upon the improvement in quality concerns of the steel manufacturers. The situation appears tougher, especially when European countries and other importers of Indian steel seem very particular about anti-dumping law. Moreover Indian market is not free from the global influence of volatility in the cost of raw materials, which has been disturbing right from annual to shorter-term price contracts. This is a serious concern for the growth of the steel industry of India. Even though India is now one of the world's top ten steelmakers its domestic output is not sufficient to fulfill its domestic demand.

Risk and challenges in international market

Unlike distress, risk has a direct link with the fluctuation in macroeconomic variables, which demands a firm to devote its time during investment selection, for which prevailing information of market plays a detrimental role. Thus attitudes towards risk, security market prices and change in taxation policy become decisive and define the discipline level of finance department of a firm. The current global steel industry is the story of mergers and acquisition, where the name of L.N. Mittal is worth to mention. The future of steel market seems optimistic with existing hurdles. From the above graph we have learnt about the scope of the capacity of production, which means that without disrupting the

present structure of the steel industry, we can have larger volume of produces to meet the rising demand of steel. Price is also showing a positive sign for the steel manufacturers following the growing demand for steel products in coming years.

Volatile contract price

Volatility of contract prices in international market is making the situation worse and non-promising as it is depicted in the following figure no. 4:

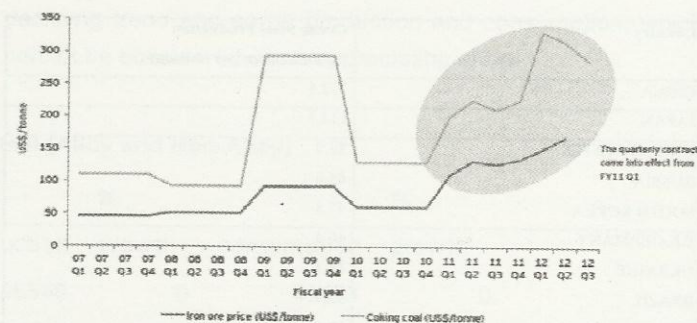


Figure no. 11: Volatility of contract prices

An industry cannot have a promising future if its growth depends on the demand from overseas in a volatile and fluctuating global business environment. Moreover a study of M.N. Dastur & Co.(P) evaluated the performance level of Indian blast furnaces and compared it to global benchmark, which states about the inferiority of Indian steel industry on account of lower size of blast furnace, inferior quality of raw materials and coke, low level of top pressure, Lower hot blast temperature, Lower coal injection rate with inadequate oxygen enrichment of blast.

Considering the comparative international productivity and market related constraints of Indian steel industry the major responsibility for the implementation of the development plans and strategies shall however rest on the industry through (i) Benchmarking with the leading global steel producers in term of the production costs, quality and service, to meet the global competition in the low tariff regime. (ii) Customer orientation and collaborative research and development with the metallurgical industries, to develop cost effective products for the domestic and export markets and to develop India as a low cost global manufacturing base for the metallurgical products. (iii) Development of rural markets and providing requisite infrastructure support for fabrication and after

sale service in the rural areas. (iv) Promote construction of steel intensive commercial buildings and domestic housing in collaboration with Architects and town planners.

Findings

India has a wide scope of market expansion from the growing demand of auto sector, realty sector, and infrastructure sector. The development of the domestic market and industries should not be depended on exports for short term gains rather it should have a long run detrimental plan and strategies. Scope of growth of Indian steel industry has not been exhausted rather it is potentially wider provided the speed of infrastructural growth and improvement in the existing technology. Indian Steel Industry is characterised as the integrated majors producers like Steel Authority of India Limited and secondary producers in non-integrated sector, which shares around 50% in total production. Production cost has scope to register an impressive success as it could be lowered to a great extent by using a better technique as is being used by Electro Steel Ltd. By modernization and expansion effort of secondary non-integrated producers Indian steel industry may reach a new height. In the same tune domestic market need attention to break the dependency on overseas demand and make Indian steel industry strong and independent to face the global turmoil and stand unshakable in front of the harshness of international business environment.

Conclusion

Indian steel industry need to match its mood with the harshness of the global instability of the market and change itself to fit in the new global business environment. It should realise that the eras of Custom Tariffs and Non-tariff barriers is over.

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