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Editor’s Message

Dear Readers,
Greetings!!

It gives me immense pleasure to bring the fourth issue of ANVESHAK—A Bi-annual International Journal of Management (AIJM) with ISSN: 2278-8913. At the outset, I would like to share some good news with all the readers that this journal is soon going to get its Impact Factor.

The goal of AIJM is to broaden the knowledge of business professionals and academicians by providing valuable insight to business-related information, ideas and research. Its purpose is to enhance the development of theory, research and practices. The journal wants to accomplish lots of milestones in terms of defining and redefining paradigms covering a wide range of issues in management. An enormous amount of work has gone into the development of this journal and I believe you will see that effort reflected in every edition and in the impact it will have on the field of knowledge enhancement. It has been an interesting journey for the last two years.

This issue contains case studies on Tata Motors and Airport Authority of India; a book review on Blue Ocean Strategy. There are research papers on wide range of topics in the areas of IT, HR, Finance and Marketing. The current issue also discusses various international economic opportunities and challenges. An article on Women Empowerment in rural areas through women entrepreneurship very well describes how entrepreneurship can reduce socio-economic disparity in India. Similarly, role of Corporate NGO in upliftment of tribal community is discussed in one of the articles.

Finally, I would like to thank all the contributors for their efforts which truly demonstrate their commitment. I look forward to our journey together as we develop AIJM into its fullest potential. Through this journal we want to showcase the state-of-the-art research with a lot of rigour and freshness in its approach. I value your support immensely and invite you to continue to be a part of this research movement.

Thank you!

Dr. Poornima Tapas
Executive Editor
## Contents

1. **A Partial Test of the Heckscher–Ohlin–Samuelson Model: US-Mexico Trade Relations and Labour in Mexico**  
   *Rachel Schmidt*¹ and *Kishore G. Kulkarni*²  
   ¹Korbel School of International Studies, University of Denver, USA  
   ²Metropolitan State University of Denver, USA

2. **Stock Market Development and Economic Growth: An Evidence from SAARC Countries**  
   ¹Eastern University, Dhanmondi, Dhaka, Bangladesh  
   ²World University of Bangladesh, Dhanmondi, Dhaka, Bangladesh  
   ³School of Business, Bangladesh Open University, Gazipur, Bangladesh  
   ⁴Faculty of Business Studies, Jagannath University, Daka, Bangladesh

3. **Great Challenge for HRM to Manage Use of Innovative Practices in Healthcare Organizations in India**  
   *Sneha Singh Munda*  
   Banaras Hindu University, Varanasi

4. **Trade Liberalization in Nepal: Has Liberalization Increased Welfare?**  
   *Jessica Strutzel*  
   Korbel School of International Studies, University of Denver, USA

5. **Awareness about Impact of Work Stress: An Empirical Study**  
   *D. Rajan*  
   Madurai Kamaraj University, Madurai, Tamil Nadu, India

6. **Women Empowerment through Women Entrepreneurs in Rural Area in Small Scale: With Reference to Jamkhandi Taluka**  
   *B.I. Kaddi*¹ and *V.S. Kulkarni*²  
   ¹BLDEA’s College Jamakhandi, Bagalakote  
   ²BLDEA’s College Jamakhandi, Bagalakote

7. **Measuring the Performance of Banks: An Application of Analytic Hierarchy Process Model**  
   *Eliza Sharma*  
   Modi Institute of Technology and Science (Deemed University), Rajasthan, India

8. **Comparative Study on Advertising and Sales Promotional Strategies in Pharmaceutical Industry—a Contemporary Thought**  
   *Prashant Kalshetti, Sudarshan S. Savanoor and Neha Sharma*  
   Indira College of Commerce and Science, Pune
9. Managing Skill Gaps through Competency Mapping—A Strategic Tool for Competitive Edge  
   Navdeep Kumar  
   Lyallpur Khalsa College, Jalandhar, Punjab  
   134

10. Employee Motivation in Airports Authority of India  
    Mu. Subrahmanian¹ and N. Abhilasha²  
    ¹Eastward Engineering College, Chennai  
    ²Anna University  
   140

11. A Critical Perspective of Information Technology (IT) Industry Growth in India  
    Radha Mohan Chebolu  
    IBS IFHE University, Hyderabad, India  
   152

12. Corporate-NGO: Need of Hour for Premeditated Improvement of Indian Tribes  
    Anurag Singh  
    Banaras Hindu University, Varanasi, Uttar Pradesh  
   161

13. Family Drove Indian Automobile Dealers are Resilient  
    Praveen D. Kulkarni  
    Proprietor, Autoclues  
   174

14. Determinants of Capital Structure in Indian Automobile Companies: A Case of Tata Motors  
    Vikas Ramesh Adhegaonkar  
    Unique Institute Management, Pune  
   182

BOOK REVIEW

15. Blue Ocean Strategy: How to Create Uncontested Market Space and Make Competition Irrelevant  
    Rita Dangre  
    Indira Institute of Management, Pune  
   189

AUTHOR INDEX  
   195
Abstract—Proponents of trade liberalization emphasize the role of trade and economic integration between less developed and more developed economies as an engine for development and improved standards of living. Nowhere is this argument more salient, and more controversial, than in the discussion of US–Mexico trade, and the North American Free Trade Agreement (NAFTA) specifically. As the Heckscher–Ohlin–Samuelson (HOS) model informs much of the rhetoric and policy surrounding the US-Mexico trade relationship, we attempt a partial test of the model and its assumptions regarding labour and employment in the case of the Mexican economy. Specifically, we focus on the Heckscher–Ohlin (HO) theorem and the Factor Price Equalization (FPE) theorem. We conclude that although economic analysts recognize that the model does not account the complexity of Mexico’s domestic economy and international trade relationships, it continues to permeate rhetoric, remaining the dominant paradigm for proponents of NAFTA on both sides of the border.

INTRODUCTION

Free trade economists promote trade liberalization and economic integration in developing countries as the key to economic development and improved standards of living. Nowhere is this more salient than in the discussion of US–Mexico economic relationship, and with the North American Free Trade Agreement specifically. Yet, since the beginning of negotiations in the mid-1980s, NAFTA has been at the centre of controversy over its social, political, environmental, and economic impact on its member countries, especially for its least developed economy—Mexico. Hailed as an unprecedented opportunity for Mexico to finally join the ranks of the world’s most developed economies, with improved living standards and the emergence of a strong middle class, NAFTA has also received the blame as a
failed experiment that has resulted in increasing income inequality, entrenched unemployment, crippling economic dependency on the US, and labour migration.²

Regardless of the controversies, Mexico is Latin America’s second largest economy and has shown promising economic growth over the past few decades, even with the setbacks of ‘peso depreciation’ in 1994–1995 and the serious economic downturn in 2008 and 2009. Mexico’s economic growth has even surpassed Brazil’s in recent years, growing at a rate of 3.9% in 2011 and 2012, and with an expected growth rate of 3.5% for 2013.³ The country has also seen an undeniable improvement in absolute income poverty rates, with those living on less than $2 per day decreasing from nearly 14% of the population in 1994 down to 4.5% in 2010.⁴ While this evidence shows that the Mexican economy is making progress overall, the expectation of free trade leading to economic convergence with its trading partners (i.e. the US) has been largely disappointed, at least in the medium term. Although Mexico’s Gross National Income (GNI) per capita has increased by 125% from 1994 to 2011, it only makes up just below 30% of US GNI per capita, which has likewise increased by 130% in the same period (World Bank 2013).⁵ Despite growth, national poverty rates also remain stubbornly over 50%, with a decrease in rural poverty offset by an increase of poverty rates in urban centres, where the majority of the population resides (see table).⁶ Additionally, inequality between the Mexican states has seen an increase in the last few decades.⁷

⁷The proportion of Mexico’s GNI per capita was slightly higher in 1994 at 31.2% of US GNI per capita. This ratio is calculated from GNI using the Purchasing Power Parity in constant 2005 international dollars (World Bank 2013). Mexico’s GNI per capita using this method has increased from $10,357 in 1994 to $12,917 while the US’s has increased from $33,200 to $43,105 over the same period.
In this paper, we are interested in the extent to which US–Mexico trade has contributed to the economic development of Mexico, especially, as concerns labour and employment. We attempt a partial test of the Heckscher–Ohlin–Samuelson (HOS) model to Mexico–US trade relations, as the model underpins much of modern trade theory. Specifically, I focus on the Heckscher–Ohlin (HO) factor endowment theorem and the Factor Price Equalization (FPE) theorem. To accomplish the task at hand, we first discuss the development of HOS model and the content of the two theorems in question, examining the implications they have for trade between two countries, at very different levels of economic development. Second, we apply the two theorems to the case of Mexico–US trade liberalization, specifically facilitated through NAFTA, to determine if and to what extent the HOS model can explain the trends in labour and employment in Mexico. Finally, we conclude with a few observations regarding the over-optimistic expectations of proponents and policy makers that free trade will ‘raise all boats’. We address some possible reasons that this has not occurred despite the close trading relationship with the US, and suggest areas for improvement.

**The Heckscher–Ohlin–Samuelson Model**

The Heckscher–Ohlin–Samuelson (HOS) model is at the heart of modern international trade theory which promotes North–South trade as a driving force for economic development for low income countries.9,10 The HOS model is derived from the contributions of two Swedish economists, Eli Heckscher (1919) and Bertil Ohlin (1933), whose work was later synthesized and expanded by Paul Samuelson, the influential Nobel-winning American economist and professor at the Massachusetts Institute of Technology. The HOS model is built largely upon Heckscher’s 1919 essay on ‘The Effects of International Trade on the Distribution of Income’ and Ohlin’s 1933 book, *International and Interregional Trade*, and marks a substantial departure from the classical comparative advantage theory of free trade that dominated 19th century. Informed by the work of David Ricardo and John Stuart Mill, the classical theory of trade was ‘a static model based strictly on a one-variable-factor (labour cost), complete-specialization approach to demonstrating the gains from trade’ that also assumed some mobility of the

factors of production between regions. In contrast, the HOS model challenges both the tenets of comparative advantage in production and of factor mobility, demonstrating how international trade can be beneficial to countries without either. Although the H–O–S model consists of four basic theorems for international trade, we will be looking at only two: (1) the Heckscher–Ohlin (HO) theorem, and (2) the Factor Price Equalization theorem.

Before discussing each, there are several conditions contained in the basic H–O–S model that need to be addressed, as they lay the groundwork for the entire analysis. Some of these ‘simplifying assumptions’ are laid out by Samuelson in his discussion, while others are traditional assumptions of free trade theory. Although Samuelson’s discussion uses the US and Europe for illustration, we take the liberty to adapt the theoretical model to the US–Mexico situation.

The ‘simplifying assumptions’ of the H–O–S model hold that:

- There are two countries, A and B (say the US and Mexico), two goods, X and Y (say clothing and machinery), and two factors of production, capital (K) and labour (L).
- Both countries have differing factor endowments.
- There is free movement of factors of production between sectors within a country.14
- There is no international mobility in the factors of production.
- Over the long term, technology of production for each good will remain the same across countries.15
- There exists perfect competition between firms and factors of production.

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12The two that we do not address are the Stopler Samuelson theorem and the Rybczynski theorem. See Karp, L. Chapter 4: The Heckscher-Ohlin-Samuelson Model. 2006. P. 81.
15*Note:* this does not mean that these two goods have the same production function, but that production of good X will have a common technological production function in both countries.
• All resources are either (a) already fully employed in production or, (b) have a tendency to be so.

• There are no transportation costs.

• For each production function, there is a constant return to scale (CRTS), and therefore, optimal capital/ labour ratios only depend on relative costs of factor prices, not on total output.\footnote{Karp, L. Chapter 4: The Heckscher-Ohlin-Samuelson Model. 2006:82.}

• Diminishing returns only exists in the sense that different proportions of one input relative to another will affect marginal productivity of factors.\footnote{Karp, L. Chapter 4: The Heckscher-Ohlin-Samuelson Model. 2006:82.}

• Tastes, which inform demand for goods, are the same everywhere.

The Heckscher–Ohlin Theorem

Essentially, the H–O theorem tells us that the differences in factor endowments between country A and B make it possible for both countries to benefit from international trade, regardless of absolute or comparative advantage. Here, factor endowment is defined either in terms of capital abundance, or in terms of labour abundance. With capital (\(K\)) and labour (\(L\)) as the factors of production, the capital labour ratio in country A and B is defined as \((K/L)_A\) and \((K/L)_B\), respectively. If the capital labour ratio of country A is larger than that of country B, or \((K/L)_A>(K/L)_B\), then country A is said to be capital abundant, while country B is said to be labour abundant. Likewise, it would be equally true to say the same if we reversed the denominators and numerators, with the labour capital ratio in country B is higher than that of country A, or \((K/L)_A<(L/K)_B\).

As a means of measuring the prices of labour and capital, the H–O Theorem utilizes the wage rate (\(W\)) for labour and the rental rate (\(r\)) for capital. Therefore, the wage rental ratio or \((W/r)_A\) can be used to compare factor endowment as well. Building on the theoretical situation above, we would say that if \((W/r)_A>(W/r)_B\) then country A is said to be capital abundant while country B is labour abundant.

In conjunction with factor abundance, the H–O theorem also takes into account the variable degree to which different goods use these factors for production, referring to the good’s production function in terms of factor intensity. Supposing that we have two goods, \(X\) and \(Y\), we can calculate the
capital-labour ratio required to produce one unit of each good, or \((K/L)_X\) and \((K/L)_Y\). If \((K/L)_X < (K/L)_Y\), then the production of good \(X\) is said to be labour intensive while the production of good \(Y\) is capital intensive.

The Heckscher–Ohlin theorem holds that if country \(A\) is capital abundant, or \((W/r)_A > (W/r)_B\), and the production of good \(X\) is capital intensive, or \((K/L)_X > (K/L)_Y\), then international trade is mutually beneficial if country \(A\) specializes in the production of good \(X\) and then exports it to country \(B\). Likewise, the reverse can be said for country \(B\), which, being labour abundant, should specialize in the production of good \(Y\), which is labour intensive, and then should export that good to country \(A\).\(^{18}\) In other words, a country will benefit from international trade if it specializes in the production of a good that uses its abundant factor intensively, and then exports that good (or goods) to the rest of the world. The implication for economic development of a low income country is, that those economies which are more labour abundant, mostly in less developed countries, should produce more labour intensive goods and export them to economies that are more capital abundant, mostly in more developed countries.

Superimposing the US and Mexico as our country \(A\) and \(B\), we would say that because the wage rental ratio \((W/r)\) is so much lower in Mexico than in the US, then \((K/L)_{US} > (K/L)_{Mexico}\), or, Mexico is labour abundant, while the US is capital abundant. Therefore, we would say that Mexico should focus its energies on producing those goods whose production use labour intensively, while the US should focus on those goods whose production uses capital intensively. Then, through international trade of these goods with each other, both countries will experience economic growth and will see a tendency toward economic convergence in the factor prices of production.

**The Factor Price Equalization Theorem**

Building on the H–O Theorem, Samuelson took it further with the Factor Price Equalization theorem, challenging the classical trade theory idea of factor mobility in his 1948 paper on ‘International Trade and the Equalization of Factor Prices’. The FPE theorem essentially holds that free trade of commodities between two countries at different levels of economic development can serve to equalize factor prices between those two countries,

\(^{18}\)Note that specialization here does NOT mean complete specialization where all production is concentrated into one good or type of goods. Rather, it signifies a higher ratio of production of a labor intensive good to the production of a capital intensive good.
without factor mobility taking place at all. In other words, the commodity mobility replaces factor mobility as the force behind factor price equalization across countries. Samuelson also went further than Ohlin by claiming that, under the established conditions, trade can bring about complete factor price equalization and therefore is a complete substitute for factor mobility.\textsuperscript{19}

The Samuelson extension posits that if before trade the wage rental ratio is higher in country $A$ (implying capital abundance) and is also higher for good $X$ (implying that production uses capital intensively), or $(W/r)_A > (W/r)_B$ and $(K/L)_X > (K/L)_Y$, then after opening to trade, country $A$ is supposed to specialize more in the production and exportation of good $X$.

Under the assumption of full employment of resources, this specialization in good $X$ will result in resources being taken from production of good $Y$, so on the Production Possibilities Curve (PPC) we will see a shift away from $Y$ towards $X$, as a lower amount of $Y$ is produced. As Samuelson points out, if this happens, an additional consequence will be a relative negative effect for the non-abundant factor of production in a country, as demand for it decreases. However, the argument is not for complete specialization in production, so use of the non-abundant factor will simply decrease proportionally, until equilibrium is reached.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{production_possibilities.png}
\caption{Domestic Production-Possibilities Curves of Mexico and US}
\end{figure}

\textsuperscript{19}Paul Samuelson, "International Trade", 165.
Without trade, Mexico is at C and US at c. With free trade they end up at the points of common slope, B and d. [Adapted from Samuelson (1949)].

For illustration, we see that the domestic production-possibilities curves (PPCs) for machinery and clothing of country A is za, and of country B is ZA. C and c, respectively, are the pre-trade levels of production of Machinery and Clothing. After trade, production of each good will shift to B and d, as each country specializes more in the good that uses its abundant factor intensively, which is labour for country B and capital for country A. The resulting slopes at B and d are equal—this is the point where trade volume is optimal.

**Before and after Trade: Factor Price Equalization**

In the graph above, the US produces good X on isoquant xx, while Mexico produces good Y on the isoquant yy. AB and CD represent the two countries’ factor price lines before trade and per the discussion above, it can be seen that the US is capital abundant, while Mexico is labour abundant. Therefore, labour will be relatively cheap in Mexico while capital will be relatively cheap in the US, therefore \((W/r)_A > (W/r)_B\) because \((K/L)_A > (K/L)_B\). Mexico exports the labour intensive good Y and imports capital intensive good X from the US, thus, we see that prices of capital tend to increase in the US and price of labour increases in Mexico—meaning that the economic return increases for those in the sector using the abundant factor intensively as a share of national income.\(^{20}\) Simultaneously, the price of the scarce factor in each country falls because the domestic demand has declined. Under conditions of free trade, this process will continue until the factor price lines (AB and CD before trade) is PL for both countries, meaning that the wage rental ratios of both countries have equalized.\(^{21}\)


\(^{21}\)This does not mean that the prices are equal. Just that their capital labour ratio is the same.
On the other side of the coin, because good $Y$ is labour intensive, lower production of good $Y$ will release labour faster than capital, and since good $X$ production is capital intensive, an increase in production of good $X$ will require capital faster than labour. As a result, the price of capital, or the rental rate ($r$), will increase, and the wage rate ($W$) will decrease simultaneously, making the wage rental ratio $(W/r)_A$ decrease. In country $B$, the exact opposite will occur. As specialization of good $Y$ causes leads to lower production of good $X$, capital will be released faster than labour, and likewise good $Y$ will need labour faster than capital, because the production of good $Y$ is labour intensive. Therefore, the wage rate ($W$) will increase as labour is in higher demand while the rental rate ($r$) will decrease, as the demand for capital decreases, causing an increase in the overall wage labour ratio $(W/r)_B$. This trend is expected to continue in the two countries until the wage rental ratios of both equate each other, or $(W/r)_A = (W/r)_B$. At this point, according to the Factor Price Equalization theorem, trade volume between country $A$ and country $B$ is optimal, capital is better off in country $A$ and labour is better off in country $B$, and further specialization will not take place. The expectation here is that developing countries will benefit from trade if they specialize in labour intensive production for export, because the trade will create a demand for that labour and the wage rate will eventually increase.

Under the conditions discussed previously, the FPE theorem has the following implications for developing countries and for Mexico specifically:

- Trade will benefit the country’s abundant factor of production (FOP).
- Labour will benefit and the wage rate will increase after trade (at least in those sectors that specialize in export production).
- If the common assumption of full employment of resources is not held, as in many less developed economies, then trade will create employment for labour in developing countries.
- Trade is a complete substitute for factor movement across borders, thereby obviating labour migration and/or capital mobility across international borders. Therefore, it is possible to bring the jobs to the labour, instead of bringing the labour to the jobs—it is not necessary for labour to move from developing countries to developed countries in search of jobs.

Under the H-O theorem, Mexico, a labour abundant country, is theoretically expected to benefit through trade liberalization by specializing in the production of those goods that use labour intensively. Under the FPE
theorem, Mexico’s wages are expected to rise and see a trend toward convergence with the US, improving the lives of the average Mexican worker and facilitate the emergence of a thriving middle class. Obviously, trade theory does not allow for the complexity of reality, as the benefit to labour and the factor price equalization effect will occur to the extent that the assumptions are valid. Many economists have offered criticisms of H–O–S model, pointing out shortcomings such as the simplicity of the model, its static nature in not accounting for changes in a country’s factor endowment, its lack of accounting for labour migration, and the phenomenon of increased inequality and entrenched underemployment despite high levels of trade and overall economic growth. In spite of all this, the H–O–S model is still the foundation in many ways for policymakers’ claims regarding the benefits of trade liberalization. I now turn to US–Mexico trade to analyze to what extent the H–O and FPE theorems apply to Mexico and to its traditionally abundant factor: labour and employment.

**THE CASE OF US-MEXICO TRADE LIBERALIZATION**

Given that the US has historically been Mexico’s most important trading partner, we will attempt to address the arguments that (1) trade with the US will bring economic growth through driving specialization in production that uses Mexico’s abundant factor intensively and (2) ultimately, Mexico’s abundant FOP (labour) will benefit. I look first at overall economic growth in terms of the absolute and comparative Gross Domestic Product (GDP) and GDP per capita. Second, we examine the structural shifts in the Mexican economy, whether or not this change has meant specialization in labour intensive production, and trends in employment and wages. Third, we discuss the well-documented undesirable trends that have accompanied trade liberalization that seem to contradict the conclusions of the H–O–S model. Finally, we summarize my findings and discuss the relevance of the H–O–S model for Mexico. Before we turn to the task of testing the H–O model through analysis of Mexico’s economic reality, it is necessary to understand the wider historical context of Mexico’s trade liberalization since the 1980s.

**History of NAFTA and Mexico’s Trade Liberalization**

Mexico’s favourable attitude toward market liberalization and pursuit of free trade is a relatively recent development, emerging only in the mid-1980s under the pro-market President Miguel de la Madrid (1982–1988). For decades under the socialist leaning PRI (a member of Socialist International), Mexico’s government had practiced a semi-closed, state led
import substitution industrialization (ISI) was the means of promoting economic growth and independence, and Mexico maintained high trade barriers to protect its domestic industries. From the 1940s to 1970s, the country enjoyed a long period of rapid growth with low inflation—referred to as the ‘Mexican Miracle’—under this model. During this period, the economy grew at around 3% per capita annually, and the country enjoyed price stability, low fiscal deficits, and saw GDP increase by six-fold, although inequality remained stubbornly persistent. Stability began to slip during the 1970s, as the country’s fiscal deficit and external public debt ballooned out of control under the administration of José López Portillo (1976–1982), accompanied with extreme double-digit inflation, large monetary devaluations in 1976 and 1981, and increasing income inequality. As the world economy went into recession, the stage was set for the debt crisis which emerged in the early 1980s and was followed by a collapse in the price of oil—one of Mexico’s chief exports. The crisis spurred the Madrid’s administration (1982–1988) to lead the way for Mexico to join the General Agreement on Tariffs and Trade (GATT—the predecessor of the World Trade Organization) and undertake drastic macroeconomic reforms, including unilateral trade liberalization and large-scale privatization. The purpose of trade liberalization was to reduce poverty and stabilize the economy by creating jobs and boosting wages through export diversification and increasing foreign direct investment. During the GATT Uruguay Round of trade negotiations (1986–1994), issues regarding services, capital, intellectual property, textiles, and agriculture—as well as the inclusion of developing countries—were being addressed for the first time. These would become central tenets of trade in Mexico’s later trade relationships, as with its first multilateral free trade agreements (FTAs) in the 1990s.

22Villarreal, Mexico’s Free Trade Agreements, CRS Report: 2.
27Esquivel et al., “The Dynamics of Income Inequality,” 158.
28Esquivel et al., “The Dynamics of Income Inequality,” 158.
Continuing in the same direction of Madrid’s administration, President Carlos Salinas (1988–1994) approached the U.S. and Canada to negotiate the North American Free Trade Agreement, which was signed by Salinas, U.S. President George H.W. Bush, Canadian Prime Minister Brian Mulroney in 1992. Serving as a model for following FTAs, the stated objectives of NAFTA were to eliminate barriers to trade, facilitate the cross-border movement of goods and services, promote conditions of fair competition, increase foreign direct investment opportunities, provide protection and enforcement of intellectual property rights, and establish a framework for further cooperation. Labour and environmental issues were also addressed for the first time through side agreements, although the effectiveness of these side agreements is questionable. Upon implementation, tariffs were eliminated on over half of Mexico’s exports to the US and a third of US exports to Mexico. Within 10 years, all US–Mexico tariffs would be eliminated except for some US agricultural exports to Mexico, which would be phased out by 2008.

Today, Mexico has 12 free trade agreements that include 44 countries (see table below). Still, her most important partner is the US, as almost 80% of Mexico’s exports go to the US, which in turn, accounts for half of Mexico’s imports. Similarly, Mexico is the US’s second largest export market and the third largest trading partner overall, behind Japan and China. Immediately after NAFTA went into force, duties were removed for nearly 70% of the US imports to Mexico and 50% of exports to Mexico, with the rest to be eliminated over 15 years. Provisions guaranteed market access for US firms in the service sector through public procurement, as well as protection for foreign direct investment (FDI) and intellectual property rights (IPR). In 2009, 88% of all Mexican exports (Canada or the US), while 51% of imports were between Mexico and NAFTA countries. The majority of this is between Mexico and the US, although the share of trade between these two has decreased slightly due to Mexico diversifying its markets with other countries. Today, the US is the largest source for FDI in Mexico.

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30Villarreal, Mexico’s Free Trade Agreements, CRS Report: 5.
32Find This Source
33M. Angeles Villarreal, Mexico’s Free Trade Agreements. CRS Report for Congress, Congressional Research Service, 2012: 3.
35Ibid.
Overall, the impact of NAFTA on the economy is mixed. In a 2004 report for Congress, Hornbeck summarized 'lessons learned' of several studies of NAFTA's impact on (1) trade and investment, and (2) on the domestic economy. In terms of trade, he found that NAFTA has had a modest effect on US–Mexico trade growth, as trade liberalization between the two countries began pre-NAFTA and would have continued the trend that began in the 1980s and 1990s. Second, he notes that NAFTA did not cause the widening US trade deficit with Mexico, which increased from $1.4 to 37.1 billion. Third, and most importantly, NAFTA was found to increase bilateral FDI by 440%, growing from $17 billion to $91.4 billion from 1994 to 2011. In terms of impact on the domestic economy, studies found NAFTA to slightly increase growth in output and productivity, that NAFTA had little or no impact on aggregate employment, yet it did bring about shifts among sectors, and was found to have a small effect on real wages (specifically in the maquila and other exporting sectors). Although NAFTA was found to have an effect on rural to urban migration, yet the extent of this is debatable, as Mexico is following an expected sectoral transformation that many other economies have also undergone.

As the evidence suggests, although not all economic trends can be attributed to NAFTA, it has proven to be the most important instrument of trade for Mexico and the US is still by far its number one trading partner. Between 1993 and 2011, overall trade among the NAFTA countries has increased by more than 300%, from 288 Million to $1 trillion—reaching a historic level of $2.7 billion trade daily between the three countries. This trading bloc accounts for an astonishing third of the world’s total gross domestic product (GDP). For Mexico alone, trade as a share of GDP climbed from 38.4% to 64.7% of GDP from 1994 to 2011.

Since the move toward trade liberalization, Mexico’s import and export market has dramatically increased. Between 1993 and 2008, Mexico’s annual merchandise exports increased by 465%, from $51.8 billion to $292.6 billion. During the same period, annual imports rose from $65.4 billion to $310.8

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billion. The U.S. accounted for the largest share of Mexico’s merchandise trade, with exports to the U.S. increasing from $42.9 billion to 234.6 billion from 1993 to 2008, while imports increased from $45.3 billion in 1993 to $152.6 billion in 2008. Although the 2009 recession caused the drop in both imports and exports, Mexico had a substantial trade surplus with the U.S. of $72.5 billion that year, as compared with the $2.4 billion deficit in 1993. However, this close trading relationship makes the Mexican economy more vulnerable to economic swings in the U.S., which became very clear in 2009 (figure below), as the Mexico economy experienced a contraction of 6.9% and the peso weakened by 25% compared to the U.S. dollar.41

![Fig. 1: Mexico’s Free Trade Agreements](image)


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A PART AL TEST OF THE HECKSCHER– Hl N–SAMUELSON MODEL

Fig. 2: GDP Growth Rates for the US and Mexico

Source: Economic Intelligence Unit

<table>
<thead>
<tr>
<th>Table 1: Composition of Merchandise Trade</th>
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</thead>
<tbody>
<tr>
<td><strong>Mexico's Leading Exports</strong></td>
</tr>
<tr>
<td>Product</td>
</tr>
<tr>
<td>Crude Petroleum Oil</td>
</tr>
<tr>
<td>Passenger motor vehicles</td>
</tr>
<tr>
<td>TV apparatus with flat panel screen</td>
</tr>
<tr>
<td>Mobile Telephones</td>
</tr>
<tr>
<td>Vehicles for transport of goods</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: Compiled by CRS using data from Mexico's Subsecretaria de Negociaciones Comerciales Internacionales

Although not all economic trends can be attributed to NAFTA, it has proven to be the most important instrument of trade for Mexico and the US is still by far its number one trading partner. Between 1993 and 2011, overall trade among the NAFTA countries has increased by more than 300%, from 288 Million to $1 trillion—reaching a historic level of $2.7 billion trade daily between the three countries.43 This trading bloc accounts for an

astonishing third of the world’s total gross domestic product (GDP). For Mexico alone, trade as a share of GDP climbed from 38.4% to 64.7% of GDP from 1994 to 2011.

**Mexico’s Economic Growth, 1990–2011**

Today, trade between the US and Mexico is more ‘free’, in terms of trade restrictions, than it ever has been. Since the North Atlantic Free Trade Agreement (NAFTA) went into force in 1994, and especially with the final phasing out of all trade restrictions that was complete in 2008, trade between the two countries has increased substantially. Although during the debate over NAFTA, trade experts such as Gary Hufbauer and Jeffrey Schott predicted that NAFTA would be a job-creating engine, eventually leading to convergence between Mexico’s living standards with those of the U.S. and Europe, Mexico has had mixed results, not all of which can be attributed to NAFTA. NAFTA’s ‘success’ is therefore debatable; it is largely a value judgment based not only on what the relevant indicators, but also on how the costs and benefits can be measured in the first place. The evidence supports the argument that that NAFTA’s overall impact through trade itself is perhaps not as important, especially in the context of Mexico’s increasing multilateral trade, when compared to the economic impact that other factors may have, including demographic trends and foreign direct investment (FDI).

We look at two economic indicators to measure the progress of Mexico’s economy relative to the United States: the Gross Domestic Product (GDP), which measures the market value of all final goods and services produced within a country in a year regardless of ownership, and the Gross National Income or Gross National Product (GNI/GNP), which counts only income accruing to domestic residents and businesses, regardless of physical location. Although each is imperfect, we use both in comparison with each other because it gives a better idea of how much economic gain is actually benefiting the domestic economy. In the tables below, we can see Mexico and the US’s (1) relative overall GDP and GNP growth in, (2) average ratio of GNI to GDP over the past 23 years and (3) trends in GNI/ GDP per capita growth.

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47Still, GNI has its limitations, as it does not tell us for certain if GNI contributes to the domestic economy, and likewise, GDP produced by foreign owned firms may benefit the domestic economy.
From all these indicators we can see that the US is still pulling or staying further ahead of Mexico on all fronts. From 1990 to 2011, average annual GDP per capita growth in Mexico was 1.23%, while it was 1.52% in the United States. As can be seen in the graphs, the wide disparity in GDP per capita in 1990 between Mexico and the United States began increasing at a higher rate beginning around 1994 to 2000, and then slowing slightly from 2000 to 2011. The gap in GDP per capita at the beginning of the period was about $22,000, and at the end of the period this gap had risen to nearly $30,000. Likewise, the ratio of GNI to GDP per capita has remained nearly constant for both countries over the past few decades, with Mexico’s GNI not even reaching 50% of GDP, while the US GNI has hovered just under 90% of GDP.

Fig. 3: GDP and GNI Growth, US and Mexico

Source: World Bank 2013

Note: GDP is measure in PPP constant 2005 international $, while GNI is measured in constant 2000 US$.

Purchasing Power Parity in constant 2005 international $.
Fig. 4: GDP and GNI per Capita, US and Mexico

<table>
<thead>
<tr>
<th>Year</th>
<th>Mexico GDP</th>
<th>US GDP</th>
<th>Mexico GNI</th>
<th>US GNI</th>
</tr>
</thead>
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<tr>
<td>1990</td>
<td>$9,990.00</td>
<td>$31,899.0</td>
<td>$4,742.00</td>
<td>$28,073.0</td>
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<tr>
<td>1994</td>
<td>$10,682.0</td>
<td>$33,428.0</td>
<td>$5,081.00</td>
<td>$29,453.0</td>
</tr>
<tr>
<td>2000</td>
<td>$11,853.0</td>
<td>$39,545.0</td>
<td>$5,666.00</td>
<td>$35,690.0</td>
</tr>
<tr>
<td>2011</td>
<td>$12,814.0</td>
<td>$42,486.0</td>
<td>$6,337.00</td>
<td>$38,239.0</td>
</tr>
</tbody>
</table>

Source: World Bank 2013
When looking at overall GP/GNI figures, it is important to keep in mind the fact that demographic trends have a huge impact on the overall health of the economy in Mexico, perhaps even more than trade (see appendix for data, tables 1–3). Along with economic growth, Mexico is undergoing a demographic transition and sectoral transformation at the same time. Therefore, increasing life expectancy accompanied with a decreasing birth rate (nearly to replacement levels as of 2012)\textsuperscript{50} is resulting in a slowing down of overall population growth, while at the same time the urban population is increasing, relative to the rural population due to increasing industrialization and the lack of employment (mainly agricultural) in rural areas. Although there is nothing extraordinary about these trends, there are both concerning and encouraging side effects. One positive consequence is that, as population growth slows and population pressure decreases, the number of immigrants from Mexico to the US is also dropping off substantially, as a larger proportion of the labour force is able to find employment in Mexico.\textsuperscript{51} On the other hand, as urbanization increases, there is a rise in the levels of urban poverty as well, as the cities simply do not have enough economic growth to absorb the high rates of population growth. Therefore, we see an increase of over 4\% in urban poverty levels from 1994 to 2011, which translates into over 40 million people living in poverty in urban areas, versus 15.3 million in rural areas in 2011. Overall, a troubling 66\% of Mexico’s families endure some form of poverty.\textsuperscript{52}

**Job Creation and Wages**

According to the official NAFTA portal website, jointly sponsored by the three member governments, trade and foreign direct investment have unequivocally benefited labour in Mexico, as ‘export firms employ one in five workers’ that are paid 40\% more on average than the general labour force working in non-export jobs.\textsuperscript{53} Additionally, it claims that ‘firms with foreign direct investment employ nearly 20\% of the labour force and pay 26\% more than the domestic average manufacturing wage.’\textsuperscript{54} Velut corroborates these figures, noting that that despite the fears that NAFTA would result in growing unemployment, statistics from the International Labour


\textsuperscript{51}Last, “Fertility and immigration,” LA Times.


\textsuperscript{54}NAFTANow.org, “Myths vs. Reality.”
Organization (ILO 2010) show that general employment in Mexico steadily increased during NAFTA’s first fifteen years from 33 to 44 million jobs (11 million jobs total) between 1993 and 2008. The official long-term unemployment rate remained in the range of 2.5 to 3.5%, keeping generally steady except in the period after the peso devaluation crisis of 1994–1995, when it reached a high of 6.9%.

Despite the positive figures, if we take a closer look at the domestic economy we see a more complex reality (see appendix tables on employment). According to NAFTA critic James Cypher, ‘stagnation, falling wages, a growing “jobs deficit”, and surging migration from 2001 through 2008 demonstrated the failure of NAFTA’s export-led strategy.’ Although all of these trends are not attributable to NAFTA or its ‘failures’, it is true that job creation in certain sectors has been offset by the combination of job loss and a growing Mexican population, resulting in high levels of emigration from Mexico in search of employment. From 2000 to 2010, manufacturing sector employment growth lost 44000 jobs while maquiladora employment growth rose by 493,000 jobs, which is roughly equal to the annual number

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for migration from 2000–2005. While overall maquilas created 1.3 million jobs in the export-manufacturing sector, jobs lost in the agricultural sector due to imports negated any substantial overall benefit this would have had on job growth, as these jobs in export manufacturing have barely kept pace with the concomitant agricultural job loss.

Therefore, although total number of jobs have increased, the growth rates overall have not been sufficient to absorb the growing Mexican labour force. Cypher notes that although employment growth in the formal economy averaged 387,000 jobs per year from 1994 through 2009, this only accounted for 38% of Mexican youth leaving school for the labour market. Consequently, in the past ten years, ‘the ten-year cumulative jobs deficit (youth entering the labour market minus formal jobs created) reached nearly eight million’. The picture is complicated even more by the impact of competition from foreign markets, which threaten the newly created jobs in Mexico. A report from the Council on Hemispheric Affairs finds that, since 2001, ‘one third of all NAFTA-created manufacturing jobs in Mexico have disappeared as North American corporations continue to move offshore operations to China, where manufacturing wages are about an eighth of those in Mexico’. Therefore, even though the export sector pays higher wages on average, these jobs are getting scarcer which places a downward pressure on wage levels.

Additionally, what the official figures from the NAFTA portal obscure is the impact trade may have on non-export sector production and wages. Despite the emphasis on job creation, the foremost concern for the Mexican government in the 1990s was pursuing strategies to boost foreign direct investment to recover from the 1980s—a free trade agreement was promoted as the way to accomplish both.63 With that in mind, it should not be surprising that foreign-owned firms account for 80% of total exports—approximately 80% of which go to the US.64 While this can mean job creation in the export sector, the benefits do not necessarily diffuse within the wider

domestic economy. Furthermore, the competitive advantage of foreign firms (on both sides of the border) has allowed them to undercut domestic manufactures for domestic consumption, which also puts downward pressure on the wages in non-trade sectors. In fact, the overall situation has actually declined as ‘real manufacturing wages in 2002 were 12% below the 1994 level, while maquiladora wages only rose by 3%’. Despite not the only relevant dynamic influencing this decrease in real wages, this competition may contribute to what Cypher refers to as the policy-based wage repression that has constrained employment growth in domestic market.

The maquila sector embodies both of the contradictory trends in jobs and wages. Showing an increase in real wage levels that was especially notable during the first decade of the 21st century—reaching 17%—this trend was accompanied by decreasing employment. The maquila program was created by the US and Mexico in 1965 in order ‘to allow tariff-free and tax-free imports of materials and components into Mexico for assembly and re-export’. Although predating NAFTA, it was impacted greatly by the agreement and maquiladora exports have doubled since 1994 due to increasing volume of ‘revolving door exports’, (a term used to refer to the mechanical parts that make up the majority of exports to Mexico, where they are assembled for re-export to US for low prices). So although while being a real ‘success’ story for improvement in wages since 2000, its contribution to job creation in the same period is concerning. Unlike the period from 1994 to 2000, when wages fell but employment increased, the opposite occurred from 2000 onward. The economic benefit is therefore very narrow, which is analogous with the maquila system as a whole, which sources most of its materials from abroad. Despite increasing volume, spillover is small as ‘only a narrow range of processing or assembly operations benefit the labour market’ with 97% of component parts being imported and only 3% being produced locally.

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Additionally, although there has been an increasing volume of trade since the 1980s, much of this is due to increased worker productivity, without a proportional increase in the number of jobs. Therefore, there is impressive growth in the volume of manufactured exports but employment in manufacturing is very disappointing.71 Perhaps not surprising, the increase in wages for only a small, and shrinking, sector of the economy, along with foreign direct investment, may explain the recent increase in inequality. Although the GINI coefficient has fallen substantially over the past twenty years, this is not an accurate measure of total wealth inequality, as it measures income (and still, that remains very high). Still, Cypher points out that the upward distribution of income is an increasing trend, as “the assets of the Mexican elite included in the annual Forbes list of the world’s wealthiest people increased by 500% from 2000 to 2010.”72 In addition, the top 20% receive roughly 67% of all income, while the bottom 10% receives not even 2%.73 A Congressional Research Service Report in 2012 notes that: “Though its net economic effects may have been positive, NAFTA itself has not been enough to lower income disparities within Mexico, or between Mexico and the United States or Canada.”74 One additional trend that needs much more investigation (but is beyond the abilities of this author at this point) is the explosive growth of the informal economy, that has been especially noticeable in the export and trade sectors.

Applying the H–O–S Model to Mexico?

Taking everything into consideration, with the very basic claims of the H–O–S model, can it explain the economic trends we observe in Mexico?

The first argument that trade will benefit the country’s abundant factor of production (FOP), which in Mexico’s case is labour, has not proven to be exactly straightforward. Some very labour intensive sectors (agriculture and manufacturing) have been either negatively impacted or with no real economic gains to show for. Second, the argument for real wage increases after trade seems only to apply to a very select few that are directly involved in certain export sectors. Third, the argument that trade will create sufficient demand for labour in developing countries when there is not full employment of resources (i.e. underemployment/unemployment) is undercut by the reality that employment is stubbornly high, and the absolute number

73 Ibid.
of people unemployed has only been increasing, despite job creation. Fourth, the argument that trade is a complete substitute for factor movement across borders, thereby obviating labour migration and/or capital mobility across international borders, has proven to be completely inapplicable to the Mexican situation.

Taking a look back at the “simplifying assumptions”, it is easy to see where the complexity of reality defies the logic of the H–O–S model and why neither the H–O theorem nor the FPE theorem holds for Mexico.

*We have two countries.*

Although Heckscher and Ohlin did not simplify it to this extent, the prevailing model considers trade between two countries. Although the US is Mexico’s largest trading partner, the reverse is not true: Mexico has to compete with other countries, like China, who are bigger overall as well as labour abundant. For example, the Council on Hemispheric Affairs notes that, “Since 2001, one third of all NAFTA-created manufacturing jobs in Mexico have disappeared as North American corporations continue to offshore operations to China, where manufacturing wages are about an eighth of those in Mexico.”

Increasingly, as Mexico pursues increased trade with other countries, the US too has to compete for the Mexican market.

*We have two factors of production, capital (K) and labour (L), and further, (a) both countries have different proportions of each, and (b) the two factors are perfectly immobile.*

Although both countries do have different proportions of the factors of production, the classic H–O–S model makes no distinction made between the qualitative differences of the same factors of production across countries. Similarly, it fails to account for other tangible and intangible factors of production, including what is now called ‘intellectual capital’ or ‘social capital’. Later economic models attempt to incorporate this factor into the analysis, as differences between the labour forces is not only one of proportions or absolute numbers but also of the quality and type of labour, skills, and ‘know-how’.

Additionally, trade has not failed to prevent factor mobility between countries, but may have increased labour migration because the flooding of the agricultural market with US goods devastated the agricultural sector. Even if trade has nothing at all to do with labour migration, the model does not account for demographic factors, such as population pressure and population growth rates. Demographic trends can

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75 “The Failures of NAFTA, 2.
76Samuelson (1948) recognizes this in his analysis.
also hugely impact the labour side of the equation, as labour ‘abundance’ or ‘scarcity’ can and does change within a single generation.

*We have only two goods, X and Y (say clothing and machinery), and each one has a common technological production function across countries.*\(^{77}\)

The same goods, such as those in agricultural production, do not have the same production function across countries, but rather demonstrate a reversal, where production is capital intensive in one country, and labour intensive in another. The argument that this will eventually happen as trade diffuses technology and ideas is also problematic due to the increasing rate of innovation in technology where the difference of a few years can mean that your technology is obsolete.

*We have perfect competition between firms and between the factors of production.*

There is no such thing as perfect competition. Differences in technology, methods of production, social capital, and policies give different sectors in one country the advantage over the same sector in another. For example, subsidies in the US allow the agricultural sector allow producers to undercut Mexican producers who do not have the same artificial supports.

*All resources are either (a) already fully employed in production or (b) have a tendency to be so.*

Although it is recognized that developing countries have a major underemployment and unemployment problems, the idea that increased free trade will create jobs and bring down the unemployment rates has not proven to be true. Trade may both create, and eliminate jobs, but employment rates are in large part dependent on the population growth rates, which, although they have slowed in the past decade, are still higher in Mexico, meaning that even if Mexico’s rate of GDP growth overall matched the US, this would lead to a smaller GDP per capita increase, meaning that the standard of living on average would still be subpar in comparison to the US.

*Countries will specialize in the production of factors that use their abundant factor intensively.*

This does not account for what is called the Leontief Paradox, where a country specializes in exports that do not use their abundant factor

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\(^{77}\)Note: this does not mean that they two goods have the same production function, but that production of good X will have a common production function in both countries.
intensively. In the Mexico situation, this means that the US is competing with the domestic market in Mexico in labour intensive

**CONCLUSION**

Despite the promises of NAFTA, and the undeniable role it has played in facilitating trade with the US, it has been criticized on multiple levels for failing to deliver, instead making Mexico’s population and domestic economy more vulnerable. Some analysts emphasize that Mexico suffers from highly concentrated FDI, lack of sufficient job creation, and the denationalization of companies in key sectors that make it difficult for government to direct public policy to promote sustainable social and economic development. Additionally, NAFTA is accused of putting Mexican farmers out of business due to subsidized U.S. agricultural exports, as well as of creating the conditions for exploitation of workers in maquiladoras, and contributing to environmental degradation by incentivizing fertilizers and chemical use, expansion into marginal land, and deforestation. Unlike other agreements that allow differential treatment for the more disadvantaged country, NAFTA had no such provisions for Mexico. Equal partnership was assumed, and although higher levels of protection remained between Canada and the U.S.—such as for sugar, dairy, and poultry—the U.S.–Mexico agreement eliminated import barriers of corn and beans to Mexico. As these foods were central to Mexico’s diet and rural economy, this policy has impacted domestic markets and consumption patterns.

As there is no requirement regarding location, FDI is highly concentrated from the U.S. (65%) in a handful of Mexican states, and in smaller pockets within those states (such as in the Federal District), which has contributed to rising regional inequality within Mexico. Companies seeking to protect profits through such instruments as the Investment Promotion and Protection Agreements (IPPAs) contribute to deregulation and denationalization of industry. Enjoying the advantage given by investment protection agreements, foreign firms begin to dominate key industries

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through acquisitions—as in the financial sector—only serving to exacerbate inequality and constrain the governments at the state and federal level.81

Policy makers who are in favour of NAFTA, on both sides of the border, rely on traditional arguments of mutual benefit to promote trade liberalization, although few economic analysts would argue that the unmodified H–O–S model is appropriate for the Mexico situation.82 Although all parties recognized that there would be winners and losers in any free trade agreement, proponents argued that the benefits for everyone would outweigh the costs in the long run. Clearly, the long-run for many has not arrived, as those on the other side of the argument point out all the flawed assumptions underpinning free trade theory that do not hold in the Mexico’s case. At the same time, these same opponents may be giving NAFTA and free trade with the US too much credit for the maladies of the Mexican economy.

The final question then is, what does the H–O–S model contribute to our understanding of US–Mexico trade, and is it at all relevant? If nothing else, an attempt to apply the classic H–O and FP theorem illuminates several issues that both the US and Mexico have to address in order to promote true economic development in both countries. Although Mexico had the first mover advantage to be the first low wage country to enter into a free trade agreement with the US and Canada,83 the global context has changed dramatically since then. In a world of increasing multilateral trade and economic integration, a disproportionate reliance for trade or investment on any one country is a liability instead of an asset for equitable economic development. As many economists building on the work of Heckscher, Ohlin, and Samuelson have argued, the H–O–S model can be reformulated to be more dynamic and relevant for the changing times, but whether or not its basic premises that specialization and increased trade among countries of the world will lead to overall equilibrium and factor price equalization in the long term remains to be seen. Unfortunately, people’s basic needs cannot wait for the long-term to sort itself out; as Keynes drily observed, ‘In the long run, we are all dead.’84

81Reveles, “EU-Mexican FTA”, 11.
84John Maynard Keynes, “A Tract on Monetary Reform” English Economist, 1883-1946 (1923) Ch. 3.
REFERENCES

Fig. 1: Trends in Population Structure 1980–2010

Fig. 2: Trends in the GINI Coefficient for Mexico

TABLE 1: DEMOGRAPHIC STATISTICS AND TRENDS (1990–2011 WORLD BANK)

<table>
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<tr>
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<tbody>
<tr>
<td>Population (1.41% mean annual growth)</td>
<td>84,306,602</td>
<td>90,691,331</td>
<td>99,959,594</td>
<td>114,793,341</td>
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<tr>
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<td>1.76%</td>
<td>1.46%</td>
<td>1.23%</td>
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<td>Fertility rate (Births per Woman)</td>
<td>3.4</td>
<td>3.0</td>
<td>2.6</td>
<td>2.385</td>
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<tr>
<td>Life expectancy at birth86</td>
<td>70.8</td>
<td>-----</td>
<td>74.3</td>
<td>76.7</td>
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<tr>
<td>Urban Population and % of total</td>
<td>60,194,914</td>
<td>66,204,672</td>
<td>74,669,817</td>
<td>88,243,131</td>
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<td>Rural Population and % of total</td>
<td>24,111,688</td>
<td>24,506,430</td>
<td>25,267,786</td>
<td>25,133,084</td>
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<tr>
<td>Net migration87</td>
<td>-1,300,597</td>
<td>-1,351,404</td>
<td>-1,805,238</td>
<td></td>
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</table>

87 Mexico’s National Institute of Statistics Geography and Information (INEGI), 2012.
### Table 2: GDP, Poverty, and Inequality Statistics and Trends (World Bank 1990–2011)

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<tr>
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<tr>
<td>GDP, PPP (constant 2005 international $)</td>
<td>$0.84 Trillion</td>
<td>$0.97 Trillion</td>
<td>$1.18 Trillion</td>
<td>$1.47 Trillion</td>
</tr>
<tr>
<td>Annual growth</td>
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<td>4.5%</td>
<td>6.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>GDP per capita, PPP (constant 2005 international $)</td>
<td>$9990</td>
<td>$10682</td>
<td>$11853</td>
<td>$12814</td>
</tr>
<tr>
<td>GDP per capita growth (annual %)</td>
<td>3%</td>
<td>2.6%</td>
<td>5.1%</td>
<td>2.7%</td>
</tr>
<tr>
<td>GINI Index</td>
<td>--- .52</td>
<td>.52</td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>Poverty (national)</td>
<td>--- 52.4%</td>
<td>53.6</td>
<td>51.3%</td>
<td></td>
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<tr>
<td>Urban Poverty</td>
<td>--- 41.2%</td>
<td>43.7%</td>
<td>45.5%</td>
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<tr>
<td>Rural poverty</td>
<td>--- 68.3%</td>
<td>38.2%</td>
<td>60.8%</td>
<td></td>
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<tr>
<td>Income share top 10%</td>
<td>--- 41.5%</td>
<td>41.4%</td>
<td>37.5%</td>
<td></td>
</tr>
<tr>
<td>Income share bottom 10%</td>
<td>--- 1.67%</td>
<td>1.55%</td>
<td>1.99%</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Labour Force and Employment Statistics for Mexico (1990–2011 World Bank)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Force (1.46% mean annual growth)</td>
<td>34,599,632</td>
<td>40,279,115</td>
<td>50,654,168</td>
<td></td>
</tr>
<tr>
<td>Labour force Participation</td>
<td>59.9%</td>
<td>60.3%</td>
<td>61.9%</td>
<td></td>
</tr>
<tr>
<td>Age dependency ratio (% of working-age population)</td>
<td>74.8%</td>
<td>69.3%</td>
<td>62.5%</td>
<td>54.9%</td>
</tr>
<tr>
<td>Employment</td>
<td>--- 33,097,811</td>
<td>---</td>
<td>45,963,942</td>
<td>(2009)</td>
</tr>
<tr>
<td>Unemployment (% of total labour force)</td>
<td>--- 4.2%</td>
<td>2.6</td>
<td>5.3%</td>
<td></td>
</tr>
<tr>
<td>Unemployed with primary education (% of total, 1995-2007)</td>
<td>60.7%</td>
<td>51.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed with secondary education (% of total)</td>
<td>--- 22.5%</td>
<td>24.5 (2007)</td>
<td>22.9%</td>
<td></td>
</tr>
<tr>
<td>Unemployment with tertiary education (% of total, 1995-2007)</td>
<td>12.5%</td>
<td>18.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment, youth (15-24 yrs)</td>
<td>7.1%</td>
<td>5.1%</td>
<td>10% (2009)</td>
<td></td>
</tr>
<tr>
<td>Part time employment</td>
<td>16.6% (1995)</td>
<td>13.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal employment (non-agricultural): ---</td>
<td>53.7% (2010)</td>
<td>18.3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

While the informal sector refers to informal enterprises, informal employment refers to informal jobs. Employment in the informal economy can be defined as the sum of employment in the informal sector and informal employment found outside the informal sector. Statistical update on employment in the informal economy. ILO Department of Statistics. June 2012. Preface. http://laborsta.ilo.org/applv8/data/informal_economy/2012-06-statistical%20update%20-%20v2.pdf


...Table 3 (Contd.)

| Persons employed in informal sector (% non-agricultural) | --- | 34% |
| Share of persons in informal employment outside informal sector | --- | 20.2% |
| Self-employed, total (% of total employed) | 28.2% | 43.7% | 36.1% | 33.9 (2009) |
| Vulnerable employment, total (% of total employment) | 25.9% | --- | 31.8% | 29.5% |


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment in agriculture (% of total employment)</td>
<td>22.6%</td>
<td>23.8% (1995)</td>
<td>17.6%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Agriculture value added Per worker (constant 2000 US$)</td>
<td>2275</td>
<td>2317</td>
<td>2551</td>
<td>3231 (2009)</td>
</tr>
<tr>
<td>As % of GDP</td>
<td>7.85%</td>
<td>5.97%</td>
<td>4.17%</td>
<td>3.92%</td>
</tr>
<tr>
<td>Employment in Industry (% of total)</td>
<td>27.8%</td>
<td>21.5% (1995)</td>
<td>26.9%</td>
<td>25.5% (2010)</td>
</tr>
<tr>
<td>Employment in services (% of total employment)</td>
<td>46.1%</td>
<td>55.1%</td>
<td>62.1% (2009)</td>
<td></td>
</tr>
<tr>
<td>Industry, value added (% of GDP)</td>
<td>28.41850191</td>
<td>26.7870113</td>
<td>28.0212402</td>
<td>34.34669424</td>
</tr>
<tr>
<td>Industry, value added (annual % growth)</td>
<td>6.711874612</td>
<td>4.81222745</td>
<td>6.10048938</td>
<td>6.03177644</td>
</tr>
<tr>
<td>Manufacturing, value added (% of GDP)</td>
<td>20.79800793</td>
<td>18.71029394</td>
<td>20.31442938</td>
<td>18.05186343</td>
</tr>
<tr>
<td>Manufacturing, value added (annual % growth)</td>
<td>6.765480823</td>
<td>4.072857406</td>
<td>6.897568977</td>
<td>9.907274653</td>
</tr>
</tbody>
</table>
### Table 5: Trade Statistics and Trends (1990–2011 World Bank)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>Export value index (2000 = 100)</td>
<td>24</td>
<td>37</td>
<td>100</td>
<td>179</td>
</tr>
<tr>
<td>Export volume index (2000 = 100)</td>
<td>26</td>
<td>39</td>
<td>100</td>
<td>133</td>
</tr>
<tr>
<td>Exports of goods and services (% of GDP)</td>
<td>18.6%</td>
<td>16.8%</td>
<td>30.9%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Exports of goods and services (annual % growth)</td>
<td>5.305180395</td>
<td>17.8%</td>
<td>16.3%</td>
<td>25.6%</td>
</tr>
<tr>
<td>ICT goods imports (% total goods imports)</td>
<td>-----</td>
<td>-----</td>
<td>20.3%</td>
<td>20.9% (2009)</td>
</tr>
<tr>
<td>High-technology exports (% of manufactured exports)</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel exports (% of merchandise exports)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT goods imports (% total goods imports)</td>
<td></td>
<td></td>
<td>20%</td>
<td>21% (2009)</td>
</tr>
<tr>
<td>Imports of goods and services (% of GDP)</td>
<td>19.7053901</td>
<td>21.6033558</td>
<td>32.93322023</td>
<td>31.76837004</td>
</tr>
</tbody>
</table>

### Table 6: US-Mexican Foreign Direct Investment Positions: 1994–2010 Historical Cost Basis

<table>
<thead>
<tr>
<th>Year</th>
<th>Mexican FDI in the U.S.</th>
<th>U.S. FDI in Mexico</th>
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</thead>
<tbody>
<tr>
<td>1994</td>
<td>2,069</td>
<td>16,968</td>
</tr>
<tr>
<td>1995</td>
<td>1,850</td>
<td>16,873</td>
</tr>
<tr>
<td>1996</td>
<td>1,641</td>
<td>19,351</td>
</tr>
<tr>
<td>1997</td>
<td>3,100</td>
<td>24,050</td>
</tr>
<tr>
<td>1998</td>
<td>2,055</td>
<td>26,657</td>
</tr>
<tr>
<td>1999</td>
<td>1,999</td>
<td>37,151</td>
</tr>
<tr>
<td>2000</td>
<td>7,462</td>
<td>39,352</td>
</tr>
<tr>
<td>2001</td>
<td>6,645</td>
<td>52,544</td>
</tr>
<tr>
<td>2002</td>
<td>7,829</td>
<td>56,303</td>
</tr>
<tr>
<td>2003</td>
<td>9,022</td>
<td>56,851</td>
</tr>
<tr>
<td>2004</td>
<td>7,592</td>
<td>63,384</td>
</tr>
<tr>
<td>2005</td>
<td>3,595</td>
<td>73,687</td>
</tr>
<tr>
<td>2006</td>
<td>5,310</td>
<td>82,965</td>
</tr>
<tr>
<td>2007</td>
<td>8,478</td>
<td>91,046</td>
</tr>
<tr>
<td>2008</td>
<td>8,420</td>
<td>87,443</td>
</tr>
<tr>
<td>2009</td>
<td>11,492</td>
<td>89,419</td>
</tr>
<tr>
<td>2010</td>
<td>12,591</td>
<td>90,304</td>
</tr>
<tr>
<td>2011</td>
<td>NA</td>
<td>91,402</td>
</tr>
</tbody>
</table>
Stock Market Development and Economic Growth: An Evidence from SAARC Countries

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Abstract—The stock market plays a pivotal role in the growth of an economy to a great extent. The study investigates the relationship between stock market development and economic growth in five SAARC countries: Bangladesh, India, Pakistan, Srilanka and Nepal using collected secondary data of 15 years for the period of 1996–2010. The relationship has been measured in terms of market capitalization, total value of stocks traded, stock turnover ratio and volume of the stock market determined through the total number of companies listed in the stock exchange of each country in this region. By using linear-log model, the study has found out that stock market affects economic growth significantly in SAARC countries. In addition, the result of the study by employing the stepwise regression analysis shows that the most representative indicator of capital market that is positively associated to the real economic growth of each country is market capitalization.

Keywords: Stock market development, Economic growth, SAARC, Market Capitalization

INTRODUCTION

The growth in countries by increasing investment and financial deepening fostered by higher saving depends on financial system of those countries. Thus, a well-functioning financial system is crucial for sustainable economic growth. The financial system plays a vital role in economic development through mobilizing savings, allocating resources, easing risk management and improving corporate governance. As a part of financial system, stock market contributes to economic development by its liquidity function and lowering cost of raising capital. A well-developed stock market contributes to the mobilization of domestic savings by enhancing the set of financial
instruments and efficiently allocates capital to productive investments which leads to an increase in the rate of economic growth. Though theory does not provide a unique concept of stock market development to guide empirical research but literatures suggest that stock market development is multifaceted, involving issue of market size, market volume, market liquidity etc.

The South Asia region has shown remarkable growth in recent times. A significant growth has been witnessed in the real GDP of SAARC (South Asian Association for Regional Cooperation) countries after starting financial liberalization since 1990s. Stock markets in SAARC countries are moving rapidly towards the path of operational efficiency and have observed significant growth and development in terms of the various yardsticks like turnover, volume of trade, market capitalization etc. The region as a whole registered over 8% annual growth in GDP for a couple of years up to 2007 and stock market capitalization grew at average annual rate of 107% (Sharma and Bodla, 2011).

The study attempts to reveal that whether the stock markets are simply like casinos where investors are coming to place bets or whether stock markets are significantly linked to economic growth. This study is undertaken to determine the empirical relationship between stock market development and economic growth in SAARC countries which includes Bangladesh, India, Pakistan, Srilanka and Nepal (Afghanistan, Maldives and Bhutan were not taken because of unavailability of sufficient data). The relationship between GDP as a proxy of economic growth and capital market development were measured in terms of size, liquidity and volume of the stock exchange of each SAARC country.

**OBJECTIVES OF THE STUDY**

The objectives of the study are as follows:

1. To determine the relationship between capital market development and economic growth in SAARC countries.

2. To find out the most representative indicator and most influential factor of capital market that is highly associated to the real economic growth of each country.

**LITERATURE REVIEW**

Numerous studies discussed about the relationship of the stock market development and the economic growth. Amaral and Quintin (2007) attempt
to determine the effects of differences in the quantity of financial intermediation on output and productivity in the context of a dynamic general equilibrium model and argue that the stock market development enhances the economic growth by making capital productive and ensuring best use of direct capital. A number of literatures argue that stock markets provide services that boost economic growth. Greenwood and Smith (1996) show that large stock markets can lower the cost of mobilizing savings and thereby facilitate investment in the most productive technologies. A number of studies argue that better financial system and especially a developed stock market can boost economic growth significantly. Thorough liquidity function, stock markets may affect economic activity at a greater extent. Bencivenga et al. (1996) and Levine (1991) argue that stock market liquidity is important for growth. As investors do not want to block their savings for long periods, they prefer to hold more of their wealth in the form of existing equity claim instead of long-run commitment of capital in other profitable investments. And in this process, stock market can play a crucial role as liquid equity market that provides investment asset which can be sold easily and rapidly. Simultaneously, firms have permanent access to capital raised through equity issues. Moreover, Holmstrom and Tirole (1993) show that the amount of information contained in the stock price depends on the liquidity of the market. Thus, liquid stock markets can increase incentives to get information about firms and improve corporate governance. According to Bencivenga and Smith (1992), a new stock market can also increase economic growth by decreasing liquid assets holdings which contributes to the physical capital growth rate in the long run. Furthermore, Paudel (2005) confirmed that stock markets, on account of liquidity, facilitate firms to attain the much needed capital quickly; therefore, it facilitates capital allocation, investment and growth. Studying the effect of stock market development on economic growth in fourteen African countries, Adajaski and Biekpe (2005) found a considerable positive impact of stock market development on economic growth in countries of upper middle-income economies.

By defining and employing some key stock market development indicators, market capitalization ratio, liquidity ratio (traded stock value/GDP) and turnover ratio (traded stock value/market capitalization), Levine and Zervos (1996) have empirically examined the association between stock market development and long-run economic growth. An overall stock market development ‘index’ has been developed and used in their study. They have found a strong positive relationship between stock market development and long-run economic growth. Their instrumental variable
results show that the predetermined component of stock market development extracted by the first-stage regressions is strongly, positively correlated with economic growth. Same stock market variables have been used in the study of Athapathu and Prabhath (2010) and they have concluded that the stock market development is an influential factor for economic growth in Sri Lanka. Atje and Jovenovic (1989) have compared the impact of the level of stock market development on subsequent economic growth. They find a large effect of stock market development as measured by the value traded divided by GDP on subsequent development. Using size and liquidity as measures of stock market development, Nowbutsing and Odit (2009) have found that stock market development positively affects the economic growth of Mauritius both in the short run and long run.

The study of Nazir et al. (2010) shows positive and significant relationship between size and liquidity of the stock market with economic growth in Pakistan. Same results have been found by the study of Shahbaz et al. (2008). The study of Ahmad et al. (2012) shows that Pakistan and Bangladesh stock markets led to the economic growth of their respective countries. Their study also reveals that market capitalization is found to have stronger influence in Pakistan, whereas, Bangladesh stock market is found more liquid and small in size to influence the economic growth. Deb and Mukherjee (2008) have used the Granger causality test to find the causal relationship between stock market development and economic growth in the Indian economy for the period 1996–2007. The results of their study have suggested unidirectional causality from both stock market activity and volatility to the real GDP growth in the Indian economy. In Nepal, Bahadur and Neupane (2006) have confirmed that the Nepalese stock market plays a significant role in determining economic growth. Hossain and Kamal (2010) have examined long-run consequences between stock market development and economic growth in Bangladesh economy. They have used real per capita income and growth rate of real GDP as the indicators of economic growth and have also used two variables—market capitalization and ratio of market capitalization to real GDP as the proxies of stock market development. They have concluded that there is a long-run equilibrium relationship between stock market development and economic growth in Bangladesh economy.

**DATA & METHODOLOGY**

This study entails a comparative analysis of five of the eight SAARC countries, that is, Bangladesh, India, Pakistan, Sri Lanka and Nepal. Afghanistan, Bhutan and Maldives have been excluded from the study due
to unavailability of sufficient data. In order to analyze the effect of stock market development on the real economic growth of the five SAARC countries, 15 years’ secondary data have been used from 1996 to 2010. To collect the data, World Bank Indicators (http://data.worldbank.org/indicator) have been used as the supplement source. The samples have been randomly selected and indicators for assessing the relationship between stock market development and economic growth including one dependent variable, that is, GDP per capita growth (in US$) and four independent variables, such as market capitalization (in US$) as a measure of stock market size, total value of stock traded (in US$) and stock turnover ratio (in percentage) both as a measure of liquidity of the stock market, and volume of the stock market (in US$) determined through the total number of listed companies. The summary descriptive statistics of the variables are shown in Appendix1.

GDP per capita is measured as GDP divided by the total population of the country. Market capitalization is measured by multiplying the outstanding shares of the companies by their share price. The assumption underlying the use of this variable (market capitalization) as an indicator of stock market development is that the size of the stock market is positively correlated with the ability to mobilize capital and diversify risk. While not a direct measure of trading costs or the uncertainty associated with trading on a particular exchange, theoretical models of stock market liquidity and economic growth directly motivate value traded (Levine, 1991; Bencivenga et al., 1996). Total value of stock traded referred to the total number of shares that is traded in the market, times their respective prices, and stock turnover ratio is calculated by dividing the total value of stock traded by market capitalization. Liquidity may importantly influence growth by easing investment in large, long-term projects and promoting the acquisition of information about firms and managers. These liquidity measures have been included in stock market development index of the present study through turnover ratio and total value of stock traded. Lastly, the volume of the stock market has been examined by the total number of all the listed companies in five SAARC countries. Log transformation with the stepwise method has been applied on the independent variables of the countries.

In order to avoid a spurious regression situation, the variables in a regression model must be stationary or co-integrated. Therefore, in the first step, unit root tests on these five time series have been performed to investigate whether they are stationary or not. To check for non-stationarity property, the data are subjected to Augmented Dickey and Fuller test (ADF test) and also the KPSS test (Kwiatkowski, Phillips, Schmidt and Shin,
The null hypothesis of ADF test states that a variable is non-stationary, whereas the null hypothesis of KPSS test states that a variable is stationary. The null hypothesis of non-stationary is rejected if the calculated ADF statistics is less than the critical value from Fuller's table. On the other hand, the null hypothesis of stationary is accepted if the value of the KPSS test statistic is less than its critical value. Stepwise regression method has been used to find the best fit model.

The hypotheses developed for the study are as follows:

- **H₀**: Stock markets development has no significant effect on the economic growth of Bangladesh.
- **H₁**: Stock markets development has significant effect on the economic growth of Bangladesh.
- **H₀**: Stock markets development has no significant effect on the economic growth of India.
- **H₂**: Stock markets development has significant effect on the economic growth of India.
- **H₀**: Stock markets development has no significant effect on the economic growth of Pakistan.
- **H₃**: Stock markets development has significant effect on the economic growth of Pakistan.
- **H₀**: Stock markets development has no significant effect on the economic growth of Srilanka.
- **H₄**: Stock markets development has significant effect on the economic growth of Srilanka.
- **H₀**: Stock markets development has no significant effect on the economic growth of Nepal.
- **H₅**: Stock markets development has significant effect on the economic growth of Nepal.

**Stationarity Tests**

**ADF Test**

ADF is performed by adding the lagged values of the dependent variable $ΔY_t$. The null hypothesis for ADF test for unit root test is $α₁ = 0$. The following regression is for the purpose of ADF test:
\[ \Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \alpha_t \Delta Y_{t-1} + \varepsilon_t \]

Where \( \varepsilon_t \) is a white noise error term and \( \Delta Y_{t-1} = (Y_{t-1} - Y_{t-2}) \) and so on are the number of lagged difference term which is empirically determined. Lag length 0 is used for the purpose of this test.

**KPSS Test**

To test the null hypothesis of stationarity, the study has also followed the KPSS test (Kwiatkowski, Phillips, Schmidt and Shin, 1992). They consider a series \( y_t \) that can be decomposed into the sum of deterministic trend, a random walk, and a stationary error: \( y_t = \xi + r_t + \varepsilon_t \), where \( \varepsilon_t \) is a stationary process and \( r_t \) is a random walk given by: \( r_t = r_{t-1} + u_t \) with \( u_t \sim iid(0, \sigma_u^2) \). The initial value \( r_0 \) is fixed and serves as the intercept. Under these assumptions, the null hypothesis of stationary is \( \sigma_u^2 = 0 \). \( \varepsilon_t \) is assumed to be an error in the stationary process, under the null hypothesis the series \( y_t \) is trend stationary. To test the null hypothesis of level stationary, \( \xi \) is set equal to zero. The number of lags in the KPSS test of this study is selected automatically by Newey and West Bandwidth using Barlett Kernal Spectral estimation method.

Table 1 shows ADF statistics used to examine the null of a unit root in the GDP per capita, market capitalization, total value of stock traded, volume of the stock market and stock turnover ratio of each country. The results in Table 1 clearly indicate that ADF tests fail to reject the null of non-stationary for all five countries except market capitalization of Bangladesh. ADF test indicates that most of the variables are first difference stationary.

To circumvent the low power in the standard unit root tests, the newly developed KPSS test is also applied to test the null of stationary against the alternative of non-stationary. The results on the GDP and capital market factors in Table 1 show that the null of stationary could not be rejected for the countries, which implies that the data on GDP, market capitalization, total value of stock traded, volume of the stock market and stock turnover ratio are stationary.
TABLE 1: RESULTS OF ADF AND KPSS TESTS

<table>
<thead>
<tr>
<th>Country</th>
<th>Variables</th>
<th>Level</th>
<th>First Difference</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>ADF</td>
<td>KPSS</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>GDP per capita</td>
<td>-1.6783</td>
<td>0.1629**</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>-4.4578**</td>
<td>0.1806**</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>-1.5340</td>
<td>0.1501**</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>-0.8928</td>
<td>0.1351**</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>-1.9806</td>
<td>0.1049*</td>
</tr>
<tr>
<td>India</td>
<td>GDP per capita</td>
<td>-0.4112</td>
<td>0.1727**</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>-2.6090</td>
<td>0.1226*</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>-2.3808</td>
<td>0.0694*</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>-1.6265</td>
<td>0.0885*</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>-2.7657</td>
<td>0.1151*</td>
</tr>
<tr>
<td>Pakistan</td>
<td>GDP per capita</td>
<td>-2.0132</td>
<td>0.1556**</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>-2.0264</td>
<td>0.0898*</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>-0.2976</td>
<td>0.1399**</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>-1.1848</td>
<td>0.1028*</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>-0.8850</td>
<td>0.1690**</td>
</tr>
<tr>
<td>Srilanka</td>
<td>GDP per capita</td>
<td>0.0671</td>
<td>0.1652**</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>-1.4663</td>
<td>0.1293*</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>-2.1677</td>
<td>0.0952*</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>-2.4860</td>
<td>0.1290*</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>-3.1337</td>
<td>0.1129*</td>
</tr>
<tr>
<td>Nepal</td>
<td>GDP per capita</td>
<td>0.1313</td>
<td>0.1685**</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>-1.9912</td>
<td>0.1123*</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>-2.2472</td>
<td>0.4666</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>-1.8515</td>
<td>0.1381*</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>-1.9519</td>
<td>0.1715**</td>
</tr>
</tbody>
</table>

Note: ***, ** and * indicate statistically significant at the 1%, 5% and 10% level respectively.
Source: Authors’ calculation using Eviews-7 software

FINDINGS OF THE STUDY

Comparison of Growth Rate of GDP per Capita among Five SAARC Countries

Figure 1 exhibits the growth rate of GDP per capita in the SAARC countries for the last couple of years. The average growth rate of GDP per capita of Bangladesh is 5.04% which indicates that during the period of 1996 to 2010 GDP per capita increased at an average rate of 5.04% per year. On the other hand, the acceleration rate of GDP per capita of Bangladesh is 0.66% which indicates that in future the growth rate will be increasing at an average rate of 0.66% per year. Similarly, the calculated average growth rates of GDP per capita of India, Pakistan, Srilanka and Nepal are 9.51%, 5.46%, 8.50% and
6.97% respectively for the period of 1996 to 2010. Besides, the acceleration rates of GDP per capita of India, Pakistan, Srilanka and Nepal are 1.35%, 0.86%, 0.59% and 0.93% respectively. It is observed that the growth rate of GDP per capita is the highest for India and the lowest for Bangladesh. Moreover, the acceleration rates of GDP per capita indicate that in future the growth rate of each country will go upward which is definitely a positive signal for the economy. The year wise growth rates of GDP per capita of five SAARC countries are given in Appendix 2.

**Fig. 1: Growth Rate of GDP per Capita of Five SAARC Countries on a Yearly Basis**

*Note: In 2008–2009 Srilanka had a final war with LTTE Guerilla and army, and for that reason GDP of Srilanka in that year fell significantly.*

### Analysis between Stock Market Development and Economic Growth Bangladesh

#### TABLE 2: STATISTICAL REGRESSION RESULTS OF BANGLADESH DATA

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>Sig*</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1587.49</td>
<td>270.7572</td>
<td>-5.86314</td>
<td>0.000</td>
<td>0.87</td>
</tr>
<tr>
<td>X Variable 1</td>
<td>53.79</td>
<td>15.09597</td>
<td>3.563402</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>X Variable 2</td>
<td>82.93</td>
<td>13.23668</td>
<td>6.264822</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>40.084</td>
<td></td>
<td></td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * Significant at 5% level, Here, X1= Stock turnover ratio, X2 = Market capitalization

*Source: Authors’ calculation using Eviews-7 software*
The following shows the best fit model find out from stepwise regression for Bangladesh:

\[ \text{GDP per capita} = -1587.49 + 53.79 \times \text{Stock turnover ratio} + 82.93 \times \text{Market capitalization}. \]

Here, it has been observed that among four market indicators, stock turnover ratio and market capitalization are the most influential factors and highly associated to the real economic growth of Bangladesh.

The results in Table 2 show that as stock turnover ratio increases by 1%, the estimated increase in the mean or average GDP per capita is US$ 53.79 and when market capitalization increases by a dollar, the estimated increase in the mean or average GDP per capita is US$ 82.93. The slope coefficient is statistically significant at 5% level and the relationship between the variables is positive. Moreover, \( F = 40.084 \) and \( P = 0.000 \) imply that the regression equation is a good model fit for the data. Finally, \( R^2 \) indicates that 87% variation of GDP per capita can be explained by total variations in independent variables.

So, we can reject our null hypothesis and accept alternative hypothesis \( (H_1) \) i.e. stock market’s development has significant and positive effect on the economic growth of Bangladesh. At the same time, the result of the study shows the best indicators of the capital market which are highly associated to the real economic growth of Bangladesh. Those indicators are stock turnover ratio and market capitalization.

**India**

The following shows the best fit model for India:

\[ \text{GDP per capita} = -7216.18 + 298.02 \times \text{Market capitalization}. \]

Here, it has been observed that among four market indicators, market capitalization is the most influential factor and highly associated to the real economic growth of India.

The results in Table 3 show that as market capitalization increases by a dollar, the estimated increase in the mean or average GDP per capita is US$ 298.02. The slope coefficient is statistically significant at 5% level and the relationship between the variables is positive. Moreover, \( F = 99.039 \) and \( P = 0.000 \) imply that the regression equation is a good model fit for the data. Finally, \( R^2 \) indicates that 88% variation of GDP per capita can be explained by variation in independent variable.
TABLE 3: STATISTICAL REGRESSION RESULTS OF INDIA DATA

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>Sig*</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-7216.81</td>
<td>795.1723</td>
<td>-9.07578</td>
<td>0.000</td>
</tr>
<tr>
<td>X Variable</td>
<td>298.02</td>
<td>29.9465</td>
<td>9.951883</td>
<td>0.000</td>
</tr>
<tr>
<td>F</td>
<td>99.039</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: * Significant at 5% level, Here, X= Market capitalization
Source: Authors’ calculation using Eviews-7 software

So, we can reject our null hypothesis and accept alternative hypothesis (H2) i.e. stock market’s development has significant and positive effect on the economic growth of India. At the same time, the result of the study that shows the best indicator of capital market that is highly associated to the real economic growth of India is market capitalization.

Pakistan

The following shows the best fit model for Pakistan:

GDP per capita = -3919.91 + 194.10 Market capitalization.

Here, it has been observed that among four market indicators, market capitalization is the most influential factor and highly associated to the real economic growth of Pakistan.

The results in Table 4 show that as market capitalization increases by a dollar, the estimated increase in the mean or average GDP per capita is US$ 194.096. The slope coefficient is statistically significant at 5% level and the relationship between the variables is positive. Moreover, F=22.78 and P = 0.000 imply that the regression equation is a good model fit for the data. Finally, R² indicates that 64 percent variation of GDP per capita can be explained by variation in independent variable.

TABLE 4: STATISTICAL REGRESSION RESULTS OF PAKISTAN DATA

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>Sig*</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-3919.91</td>
<td>958.733</td>
<td>-4.08864</td>
<td>0.001</td>
</tr>
<tr>
<td>X Variable</td>
<td>194.10</td>
<td>40.66501</td>
<td>4.773066</td>
<td>0.000</td>
</tr>
<tr>
<td>F</td>
<td>22.78</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: * Significant at 5% level, Here, X= Market capitalization
Source: Authors’ calculation using Eviews-7 software

So, we can reject our null hypothesis and accept alternative hypothesis (H3) that is stock markets development has significant and positive effect on the economic growth of Pakistan. At the same time the result of the study shows the best indicator of capital market that is highly associated to the real economic growth of Pakistan is market capitalization.
Srilanka
The following shows the best fit model for Srilanka:

\[
\text{GDP per capita} = -10806 + 549.44 \text{ Market capitalization.}
\]

Here, it has been observed that among four market indicators, market capitalization is the most influential factor and highly associated to the real economic growth of Srilanka.

The results in Table 5 show that as market capitalization increases by a dollar, the estimated increase in the mean or average GDP per capita is US$ 549.444. The slope coefficient is statistically significant at 5% level and the relationship between the variables is positive. Moreover, \( F = 44.34 \) and \( P = 0.000 \) imply that the regression equation is a good model fit for the data. Finally, \( R^2 \) indicates that 77% variation of GDP per capita can be explained by variation in independent variable.

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>Sig*</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-10806.1</td>
<td>1809.597</td>
<td>-5.97154</td>
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</tr>
<tr>
<td>X Variable</td>
<td>549.44</td>
<td>82.51364</td>
<td>6.658833</td>
<td>0.000</td>
</tr>
<tr>
<td>F</td>
<td>44.34</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: *Significant at 5% level, Here, X= Market capitalization
Source: Authors’ calculation using Eviews-7 software

So, we can reject our null hypothesis and accept alternative hypothesis (H₄) i.e. stock market’s development has significant and positive effect on the economic growth of Srilanka. At the same time, the result of the study shows that the best indicator of capital market that is highly associated to the real economic growth of Srilanka is market capitalization.

Nepal
The following shows the best fit model for Nepal:

\[
\text{GDP per capita} = -1288.45 + 76.67 \text{ Market capitalization.}
\]

Here, it has been observed that among four market indicators, market capitalization is the most influential factor and highly associated to the real economic growth of Nepal.
The results in Table 6 show that as market capitalization increases by a dollar, the estimated increase in the mean or average GDP per capita is US$ 76.67. The slope coefficient is statistically significant at 5% level and the relationship between the variables is positive. Moreover, $F = 72.06$ and $P = 0.000$ imply that the regression equation is a good model fit for the data. Finally, $R^2$ indicates that 85% variation of GDP per capita can be explained by variation in independent variable.

**Table 6: Statistical Regression Results of Nepal Data**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>$t$ Stat</th>
<th>Sig*</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1288.45</td>
<td>186.9533</td>
<td>-6.89181</td>
<td>0.000</td>
</tr>
<tr>
<td>X Variable</td>
<td>76.67</td>
<td>9.030772</td>
<td>8.489323</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: * Significant at 5% level, Here, X= Market capitalization

Source: Authors' calculation using Eviews-7 software

So, we can reject our null hypothesis and accept alternative hypothesis (H₅) i.e. stock market’s development has significant and positive effect on the economic growth of Nepal. At the same time the result of the study shows that the best indicator of capital market that is highly associated to the real economic growth of Nepal is market capitalization.

**CONCLUSION**

This study has addressed the issue of functional relationship between stock market development and economic growth of SAARC countries using data during the period of 1996–2010. Countries of this region have observed growth rate in GDP per capita on an average 5% to 10% where India experienced a highest growth rate and Bangladesh experienced a lowest growth rate among five SAARC countries during this period. In this study, the impact of stock market variables on GDP per capita as a dependant variable of economic growth is empirically tested. The data suggest that there is a significant positive relationship between stock market development and economic growth for each country. The results of the study by employing the stepwise regression analysis show that the most representative indicator of capital market is market capitalization which is significantly and positively associated to the real economic growth of each country. For Bangladesh, besides market capitalization, stock turnover ratio is also found to be another influential market indicator, which is positively related to the GDP per capita. To assess the relationship with economic growth, this study suggests the use of market capitalization as the best proxy for stock market development. However, the study could be more rigorous if the shorter intervals of the data could be used rather than annual data. So, the study can be proceed further by using monthly data and the results can be compared to the other countries of the region as well as developed countries in future.
REFERENCES


## APPENDIX 1: SUMMARY STATISTICS OF THE STUDY VARIABLE

<table>
<thead>
<tr>
<th>Country</th>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bangladesh</strong></td>
<td>GDP per capita</td>
<td>428.54</td>
<td>104.22</td>
<td>674.93</td>
<td>339.08</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>3.95E+09</td>
<td>3.94E+09</td>
<td>1.57E+10</td>
<td>8.65E+08</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>3.42E+09</td>
<td>5.13E+09</td>
<td>1.47E+10</td>
<td>3.27E+08</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>240.26</td>
<td>34.75</td>
<td>302</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>71.16</td>
<td>54.25</td>
<td>212.56</td>
<td>12.64</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>GDP per capita</td>
<td>691.09</td>
<td>326.6</td>
<td>1410.33</td>
<td>395.23</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>5.49E+11</td>
<td>5.7E+11</td>
<td>1.82E+12</td>
<td>1.05E+11</td>
</tr>
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<td></td>
<td>Total value of stock traded</td>
<td>5.12E+11</td>
<td>3.8E+11</td>
<td>1.11E+12</td>
<td>9.62E+10</td>
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<tr>
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<td>Volume of the stock market</td>
<td>5375.33</td>
<td>508.42</td>
<td>5999</td>
<td>4730</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>132.47</td>
<td>61.64</td>
<td>306.49</td>
<td>75.61</td>
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<tr>
<td><strong>Pakistan</strong></td>
<td>GDP per capita</td>
<td>653.25</td>
<td>212.34</td>
<td>1018.87</td>
<td>445.79</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>2.39E+10</td>
<td>1.94E+10</td>
<td>7.03E+10</td>
<td>4.94E+09</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>4.79E+10</td>
<td>4.45E+10</td>
<td>1.41E+12</td>
<td>6.05E+09</td>
</tr>
<tr>
<td></td>
<td>Volume of the stock market</td>
<td>706.6</td>
<td>55.80</td>
<td>782</td>
<td>644</td>
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<td></td>
<td>Stock turnover ratio</td>
<td>236.49</td>
<td>153.11</td>
<td>497.40</td>
<td>36.18</td>
</tr>
<tr>
<td><strong>Srilanka</strong></td>
<td>GDP per capita</td>
<td>1235.41</td>
<td>526.62</td>
<td>2375.44</td>
<td>757.75</td>
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<td></td>
<td>Market capitalization</td>
<td>4.74E+09</td>
<td>4.89E+09</td>
<td>1.99E+10</td>
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<td>Total value of stock traded</td>
<td>7.47E+08</td>
<td>7.98E+08</td>
<td>3.31E+09</td>
<td>1.34E+08</td>
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<tr>
<td></td>
<td>Volume of the stock market</td>
<td>237.8</td>
<td>3.83</td>
<td>245</td>
<td>231</td>
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<td></td>
<td>Stock turnover ratio</td>
<td>16.97</td>
<td>6.83</td>
<td>35.02</td>
<td>6.96</td>
</tr>
<tr>
<td><strong>Nepal</strong></td>
<td>GDP per capita</td>
<td>296.13</td>
<td>100.61</td>
<td>524.77</td>
<td>204.24</td>
</tr>
<tr>
<td></td>
<td>Market capitalization</td>
<td>1.83E+09</td>
<td>2.05E+09</td>
<td>5.48E+09</td>
<td>2E+08</td>
</tr>
<tr>
<td></td>
<td>Total value of stock traded</td>
<td>8.28E+07</td>
<td>1.07E+08</td>
<td>3.66E+08</td>
<td>4.00E+06</td>
</tr>
<tr>
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<td>Volume of the stock market</td>
<td>121.46</td>
<td>30.66</td>
<td>190</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Stock turnover ratio</td>
<td>4.76</td>
<td>2.31</td>
<td>9.31</td>
<td>1.71</td>
</tr>
</tbody>
</table>

*Note: GDP per capita, Market capitalization & Total value of stock traded in US $. Stock turnover ratio in percentage.*

*Source: Authors’ calculation using Eviews-7 software*
## Appendix 2: Growth Rate of GDP Per Capita

<table>
<thead>
<tr>
<th>Year</th>
<th>Bangladesh</th>
<th>India</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Nepal</th>
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<tbody>
<tr>
<td>1996</td>
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<td>6.99%</td>
<td>1.72%</td>
<td>6.02%</td>
<td>0.22%</td>
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<td>1.99%</td>
<td>3.91%</td>
<td>-3.98%</td>
<td>8.08%</td>
<td>6.13%</td>
</tr>
<tr>
<td>1998</td>
<td>2.16%</td>
<td>-0.48%</td>
<td>-2.95%</td>
<td>4.20%</td>
<td>-3.66%</td>
</tr>
<tr>
<td>1999</td>
<td>1.67%</td>
<td>6.36%</td>
<td>-1.22%</td>
<td>-1.41%</td>
<td>1.17%</td>
</tr>
<tr>
<td>2000</td>
<td>1.24%</td>
<td>0.44%</td>
<td>14.78%</td>
<td>3.56%</td>
<td>6.58%</td>
</tr>
<tr>
<td>2001</td>
<td>-2.07%</td>
<td>2.15%</td>
<td>-4.23%</td>
<td>-4.48%</td>
<td>6.80%</td>
</tr>
<tr>
<td>2002</td>
<td>-0.51%</td>
<td>4.45%</td>
<td>-1.90%</td>
<td>7.41%</td>
<td>-1.57%</td>
</tr>
<tr>
<td>2003</td>
<td>7.33%</td>
<td>16.36%</td>
<td>13.07%</td>
<td>9.06%</td>
<td>2.30%</td>
</tr>
<tr>
<td>2004</td>
<td>7.29%</td>
<td>18.54%</td>
<td>15.64%</td>
<td>8.09%</td>
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<td>2005</td>
<td>5.09%</td>
<td>13.86%</td>
<td>9.90%</td>
<td>16.74%</td>
<td>9.46%</td>
</tr>
<tr>
<td>2006</td>
<td>1.42%</td>
<td>12.39%</td>
<td>14.27%</td>
<td>14.56%</td>
<td>9.41%</td>
</tr>
<tr>
<td>2007</td>
<td>9.29%</td>
<td>28.71%</td>
<td>10.29%</td>
<td>13.26%</td>
<td>11.10%</td>
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<td>2008</td>
<td>15.07%</td>
<td>-3.52%</td>
<td>12.42%</td>
<td>24.62%</td>
<td>20.08%</td>
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<td>2009</td>
<td>11.14%</td>
<td>11.68%</td>
<td>-3.03%</td>
<td>2.35%</td>
<td>0.74%</td>
</tr>
<tr>
<td>2010</td>
<td>11.05%</td>
<td>23.67%</td>
<td>7.35%</td>
<td>16.71%</td>
<td>19.76%</td>
</tr>
</tbody>
</table>

*Source: Authors’ calculation*
Great Challenge for HRM to Manage Use of Innovative Practices in Healthcare Organizations in India

Sneha Singh Munda
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Abstract

Purpose
The study examined differences in the quality of patient care provided by medical professionals and their turnover intentions in private and public hospitals as a function of perceived levels of innovative practices, used in healthcare organizations. It was expected that the relationship between innovative practices was more likely to be positive with quality of patient care provided by medical professionals and negative with turnover intentions of medical professionals in the private and public hospitals.

Sample and Method
The study was conducted on a sample of 253 medical professionals from a large public hospital (N = 127) and a large private hospital (N = 126) in north India using questionnaire method.

Finding
Stepwise regression analysis of the data revealed that the use of ‘innovative practices’ emerged as a positive predictor of quality of patient care in private hospital, whereas negatively predicted quality of patient care in public hospital.

Implication and Value
The study has important implications for Indian hospitals in the private and public sector which are currently facing problems of providing quality of care to their patients. Despite using innovative technologies and trends, Indian hospitals are lacking in improving their performance. Data also showed that HR management strategies of West to manage use of innovative technologies and practices are not always applicable and suitable in Indian context.

Keywords: Innovative practices, Quality of patient care, Turnover intentions

INTRODUCTION

Studies have shown that widespread adoption of information and communication technologies (ICT) in the health sector is a key strategy to face the challenges of increasing demands for quality of patient care, workforce shortages due to high turnover intentions of medical professionals because of increased workload. It is shown that innovative techniques of information and communication are capable of increasing efficiency,
reducing errors, supporting more team-based care, improving integration of best practice into routine care, enabling consumers to engage more actively in their care, and producing more efficient services through changes in professional roles and responsibilities. Medical professionals perceive that ICT is central to improving communication and teamwork to deliver a safer health system (Runciman, 2007).

Innovative Practices
Thompson (1967) states: “the generation, acceptance and implementation of new ideas, process, products, or services.” One of the single most important challenges for health systems is to establish new models of service delivery which increase capacity and provide rapid, safe, effective and affordable health care, and do so sustainably, within health workforce and resource constraints (Kohn, Corrigan & Donaldson, 2000). A key strategy being advanced to meet this challenge is increased use of information and communication technologies (ICT) (Deloitte, 2008). Studies have shown that the use of ICT in the health sector is capable of increasing efficiency, reducing errors, supporting more team-based care, improving integration of best practice into routine care, enabling consumers to engage more actively in their care, and producing more efficient services through changes in professional roles and responsibilities (Chaudhry, Wang, Wu, Maglione, Mojica, Roth, Morton & Shekelle, 2006). Medical professionals also perceive that use of innovative technologies redistribute their workload. Thus, use of innovative practices increased the efficiency of the medical professionals and now they are more able to deliver quality of patient care which also provide them immense professional satisfaction and reduce their turnover intentions.

Despite this fact, although the use of ‘innovative practices’ helps to increase quality of patient care, but it acts as a double-edged sword. On one hand, it can help physicians better understand and treat disease. On the other hand, it erodes a physician’s confidence in his or her own professional judgment. When a physician begins to mistrust his own non-technical, diagnostic abilities, he reduces himself to an intermediary between the patient and the laboratory technicians and their machines (Reiser, 1978). According to Burke and Litwin (1989), organizational changes perceived as a threat for power, position and status of the senior employees, so that the process of organizational change in which individuals adapt according to environmental change not always perceived positively. It may include the acceptance of new techniques, new management strategy or policy (Burke & Litwin, 1989). Since organizational change leads to the redistribution of
benefits and the adjustment of relationships between different positions, employee resistance can be expected. A few studies, however, have used qualitative research to examine employee dissatisfaction that arises because of organizational change. The inevitability of organizational change in the highly competitive modern business world is having an increasing impact on employees, and these changes can lead to strong resistance among organization’s employees (Tsoukas, Haridimos & Chia, 2002). Technology-related adverse events can be associated with all components of a comprehensive technology system and may involve errors of either commission or omission. These unintended adverse events typically stem from human–machine interfaces or organization/system design. The overall safety and effectiveness of technology in healthcare ultimately depends on its human users, ideally working in close concert with properly designed and installed electronic systems. Any form of technology may adversely affect the quality and safety of care if it is designed or implemented improperly. Not only must the technology or device be designed to be safe, it must also be operated safely within a safe workflow process. So, before implementation of innovative practices such as advanced techniques, technologies or innovative HR practices need proper planning and training. If not carefully planned and integrated into workflow processes, new technologies can create new work, complicate workflow, or slow the speed at which clinicians carry out clinical documentation and ordering processes. Learning to use new technologies takes time and attention, sometimes placing strain on already demanding schedules. The resulting change to clinical practices and workflows can trigger uncertainty, resentment, or other emotions that can affect the worker’s ability to carry out complex physical and cognitive tasks, these constraints may lead to much confusion or frustration which reduces the efficiency of medical professionals to provide quality of patient care and increase the rates of turnover intentions.

Quality of Patient Care

The word CARE itself stands for courtesy, attentiveness, responsiveness and empathy. Therefore, quality assurance aspect becomes top priority in hospitals in recent years. So, a number of private and public hospitals are constantly innovating and improving the technical/ clinical and service aspects like never before, in order to provide world-class quality and care but public hospitals are still lagging behind. Quality of patient care is a critical factor for increasing the efficiency of any hospital. The quality and safety of care provided by healthcare professionals depend on many aspects. According to Donabedian (1990), quality is simply an attribute that the technical and interpersonal aspects of medical care manifest in varying
degrees. He provided criteria for what constitutes ‘good care’, using the framework of structure (related to physical environment and facilities), process (related to interaction with service personnel) and outcome (the result of the interaction). Donabedian developed seven attributes of health care quality:

- **Efficacy**: The best result or benchmark for a particular diagnosis.
- **Effectiveness**: Ordinary medicine, or the industry average.
- **Efficiency**: A measure of cost, or the least costly of the two identically effective treatments.
- **Optimality**: Cost-benefit evaluation, or the point at which further resources do not add benefit.
- **Acceptability**: Adaptation of care to the wishes, expectations and values of patients and their families.
- **Legitimacy**: The community’s view of care.
- **Equity**: The principle by which one determines what is just or fair in the distribution of care and its benefits among the members of a population.

The quality of care provided by a healthcare professional depends on many factors. One of the most important is ‘innovative practices’ used in the hospitals to improve the quality of care provided to patients by medical professionals and reduce the turnover intentions rates of medical professionals. Literature shows that use of innovative techniques in the hospitals, is very beneficial for medical professionals to enhance quality of patient care and to reduce turnover intentions of medical professionals.

**Turnover Intentions**: ‘Turnover’ is defined as the movement of employees out of the organisation. Turnover intention is normally the predecessor of the actual turnover. It is defined as mental decisions intervening between an individual’s attitudes regarding a job and the stay or leave decision. The occurrence of staff turnover in an organisation can be harmful to the organisation in such a way that high employee turnover becomes very costly to the organisation because of monetary costs incurred in recruiting, training, low productivity, more accidents and disruptions in programmes and projects. Most importantly, it raises quality problems of the services/ products delivered, thus tarnishing the image of the organisation. According to Mobley, W.H. (1977), there is a close relationship between employee satisfaction and employee turnover. If the employees morale
decreases and there is insecurity in a job, employees are likely to leave the organization and seek alternative employment. The fact that globalization increased the cut-throat competitions in business world, so for survival there is a need for change in organizations. But change in its diversities also introduces feelings of uncertainty and insecurity in employees. Across industries, such complementary changes have been found to be critical for generating benefits from the new technology. So, resultant changes to work practices can lead to efficiencies for some staff and inefficiencies for others. Changes in role responsibilities and information flows may become a major point of conflict between staff groups. This, as a result, may lead to low morale, anxieties and related negative outcomes. All these have a potential effect on the employee job satisfaction, organizational commitment and turnover intentions (Burnes, 1996).

**ANTECEDENT VARIABLE**

![Diagram](image)

**Fig. 1: Hypothetical Model of Relationships between the Antecedent and Outcome Variables in Private and Public Hospitals**

**HYPOTHESES**

1. The use of ‘innovative practices’ in the hospitals would be positively related to the quality of patient care.
   
   a. It is expected that the use of ‘innovative practices’ are more likely to be positively related with delivery of quality of patient care by medical professionals working in the private hospitals as compared to the public hospitals.
   
   b. It is expected that the use of ‘innovative practices’ are more likely to be negatively related with turnover intentions of medical professionals in the private hospital as compared to the public hospital.
METHOD

Sample
The sample consisted of 253 medical professionals ranging from physicians to the nursing staff. Within the sample, 126 participants belonged to a private hospital and 127 belonged to the public hospital.

Private Hospital
Apollo, Abdur Razzaque Ansari Memorial Hospital (ARAM) located on the Ranchi-Hazaribagh National Highway No. 33.

Public Hospital
Sir Sunderlal Hospital, located in the campus of Banaras Hindu University, Varanasi, was selected as the central government hospital.

Measures
Scales for the following variables were used in the present study:

Innovative Practices
The innovative practices scale was used by Lewis and Beck (1977) containing three parameters to measure the extent in which innovative practices are used in hospitals.

Quality of Patient Care
This scale was based on the dimensions of quality of patient care proposed by Kelly and Hurst (2006). Initially, there were 11 parameters where each item was related to a specific health care service quality condition.

Turnover Intentions
This measure is based on a scale constructed by Mobley, Horner, and Hollingsworth (1978). The scale initially consisted of 3 parameters. The Cronbach’s alpha for this scale was 0.97.

RESULTS

Analysis: Hypothesis 1(a)
Data were analyzed to examine the hypothesized differences in the quality of patient care delivered in private and public sector hospitals after using ‘innovative practices’ through computation of stepwise regression on the scores of all the variables in the two types of hospitals.
Stepwise Regression Analysis

In Private Hospital: Table 1(a) result shows that the process variable, i.e., use of ‘innovative practices’ positively predicted 11% variance with positive beta of .32. That means, when innovative practices were used in the private hospital, they helped medical professionals to deliver quality of patient care more smoothly and efficiently.

In Public Hospital: Result showed that, use of ‘innovative practices’ negatively predicted 3% variance with beta -.7. That means, when innovative practices used in the public hospital they created hindrances in the path of medical professional to deliver quality of patient care.

Table 1(a): Stepwise Regression of Quality of Patient Care with Process Variable IE Use of ‘Innovative Practices’ in Private and Public Hospitals

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>R² Change</th>
<th>%</th>
<th>Beta</th>
<th>t ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative practices</td>
<td>.472</td>
<td>.223</td>
<td>.108</td>
<td>11%</td>
<td>.328</td>
<td>4.12**</td>
</tr>
</tbody>
</table>

Private Hospital (N=126)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>R² Change</th>
<th>%</th>
<th>Beta</th>
<th>t ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative practices</td>
<td>.697</td>
<td>.486</td>
<td>.029</td>
<td>3%</td>
<td>-.17</td>
<td>-2.63**</td>
</tr>
</tbody>
</table>

Public Hospital (N=127)

*p<.05; **<.01

Analysis: Hypothesis 1(b)

Data were analyzed to examine the hypothesized differences in the ‘turnover intentions’ in private and public sector hospitals after using ‘innovative practices’ through computation of stepwise regression on the scores of all the variables in the two types of hospitals.

Table 1(b): Stepwise Regression of Turnover Intentions with Process Variable IE Use of ‘Innovative Practices’ in Private and Public Hospitals

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>R² Change</th>
<th>%</th>
<th>Beta</th>
<th>t ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative practices</td>
<td>.631</td>
<td>.398</td>
<td>.398</td>
<td>40%</td>
<td>-.631</td>
<td>9.05**</td>
</tr>
</tbody>
</table>

Private Hospital (N = 126)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>R</th>
<th>R²</th>
<th>R² Change</th>
<th>%</th>
<th>Beta</th>
<th>t ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative practices</td>
<td>.287</td>
<td>.083</td>
<td>.045</td>
<td>5%</td>
<td>.248</td>
<td>2.46**</td>
</tr>
</tbody>
</table>

Public Hospital (N = 127)

*p<.05; **<.01

In Private Hospital: Table 1(b) result showed that the process variable, i.e., use of ‘innovative practices’ positively predicted 40% variance with negative beta of -.63. That means, when innovative practices were used in the private hospital, they helped to reduce the turnover intentions of medical professionals.
**In Public Hospital:** Table 1(b) result showed that the process variable, i.e. use of ‘innovative practices’ positively predicted 5% variance with positive beta of 24. That means, when innovative practices used in the public hospital they increased the turnover intentions of medical professionals.

**Summary of Findings**

**Finding Supported Hypothesis**

That in general, the use of innovative practices was perceived more favourably by the participants in private hospital to deliver quality of patient care, but not in the public hospital.

**Finding Partially Supported Hypothesis**

That in general, the use of innovative practices was perceived more favourably by the participants in private hospital and helpful in reducing their turnover intentions. Whereas, in public hospitals, the same factor dramatically increased the turnover intentions in medical professionals. So, this result needs a great attention, that is why it is happening in public sector hospital.

**DISCUSSION**

An attempt has been made in this study to measure the differences in the perception of medical professionals of private and public hospital in using innovative practices, i.e. innovative techniques, technologies and services. But results are eye-opening, that excess of everything is bad, and when we introduce any type of change it needs proper planning. Result of private hospital showed that despite using innovative practices medical professionals are not able to provide quality of patient care. Why is the public health care system still unable to achieve a breakthrough in its quality performance? Some policy makers believe that the problem is a limited implementation of quality-improvement initiatives, which, if implemented, would result in high-quality performance. So, they used innovative techniques, technologies and practices, and expect that only by using new trend and techniques organization will achieve growth and development. Whereas every adoption needs proper planning, and if it is implemented without proper training and information it will create negative outcome rather than positive. When innovative techniques introduced in the public hospital without proper planning, training and information it will be perceived as a threat for power, position and recognition by the employees. We commonly hear that people resist change. In fact, they resist actions that they believe will lead them into some sort of pain or discomfort. We tend to believe that many changes that
might be proposed in organizations will ultimately be to our detriment. This means, employees fear that they will lose their position, or some privilege, or advantage. It is the first responsibility of management to mitigate this fear—to instill and support fearlessness throughout the company. If management doesn’t understand this, then the level of trust that is required by a culture of innovation will never appear and innovation will either proceed at the edge of a sword or it will inhibit a strong defensive tower like that built by traditional R&D departments. Physicians interviewed doubted that any ‘silver bullet’ technology will dramatically simplify innovative technique (Electronic medical record) usage since it required high initial financial costs, slow and uncertain financial payoffs, and high initial physician time costs. Underlying barriers included difficulties with technology, complementary changes and support, electronic data exchange, financial incentives, and physicians’ attitudes. So, it is stated by Burke and Litwin (1989), that before introduction of innovative practices, employees need a information as to why should they need the change, and how this change is beneficial for them? So, if these precautions will not be taken before introducing new techniques and technologies in the hospitals, this imitation will result in the change to clinical practices and workflows, which can trigger uncertainty, resentment, or other emotions that can affect the worker’s ability to carry out complex physical and cognitive tasks. These constraints may lead to much confusion or frustration which reduces the quality of patient care provided by medical professionals and increase the turnover intentions in them.

CONCLUSION

It is clear from the results that our culture has gradually adopted the belief that technology is the foundation of the medical profession. Technology and machinery are equated to accuracy, precision, and objectivity. But before the blind acceptance of technology, management should try to create a work environment that encourages employee involvement, trust its employees and share information with employees before introducing any type of innovative change. If management doesn’t understand this, then the level of trust that is required by a culture of innovation will never appear and fear of loss of position or some privilege or advantage will lead to negative outcomes such as distrust and increased rate of turnover intentions. So, in this study, we deal with the problems and challenges faced by the hospitals in implementing innovative technologies and techniques and share precautions, which management should keep in mind before introducing any change, which may be needed for the growth and development of the healthcare organizations.
REFERENCES


Trade Liberalization in Nepal: Has Liberalization Increased Welfare?

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University of Denver, Denver, CO 80209

Abstract—Nepal drastically liberalized trade in the late 1980s and early 1990s, and it currently has the lowest tariff rates in South Asia. Nepal is also a member of multiple regional trade and bilateral trade agreements and it joined SAFTA in 2008. An analysis of Nepal’s economic growth, income inequality, and poverty, along with the problems of SAFTA reveal that liberalized trade has only brought modest gains to Nepal. These gains have slightly benefited Nepal’s urban sector and the richest segment of the society, and have failed to be distributed across the population.

Keywords: trade liberalization, regional trade agreements, SAFTA, and gains from trade

INTRODUCTION

Since Adam Smith proposed the Theory of Absolute Advantage in 1776, numerous economists have argued that free trade increases national welfare. These proponents of free trade argue that unobstructed trade is the best way to achieve growth. Supporters of fair trade, on the other hand, argue that obstructed forms of trade, like regional trade agreements, bring more gains from trade, especially for developing countries. Nepal is one of the poorest countries in the world, and it vastly liberalized trade during the late 1980s and early 1990s. Nepal now has the lowest tariff rates in South Asia and low levels of other barriers to trade. Nepal is also a member of multiple free trade agreements, and it joined the South Asian Free Trade Area (SAFTA) in 2006. Despite this trade liberalization, Nepal has only experienced very modest gains from trade.

This paper evaluates Nepal’s gains from trade by reviewing Nepal’s GDP growth, income inequality, and poverty levels after trade liberalization. This evaluation reveals that trade has not brought the level of increased welfare that should be expected with such drastic trade reforms. Trade did bring gains to Nepal, but the richest, urban segment of the population absorbed those modest gains.

LITERATURE REVIEW

Free Trade

Numerous economic thinkers have asserted that international trade increases national welfare of trading nations by promoting economic growth.
In 1776, Adam Smith published *The Wealth of Nations* and proposed the absolute advantage theory. The theory of absolute advantage states that trade will allow a country’s labour to specialize in the production of the good that has lower labor costs, and trade also allows for the international division of labor. David Ricardo later proposed the comparative advantage theory, which shows that trade is mutually beneficial even if a country has the absolute advantage of production in both goods. Neoclassical economists also showed the gains from international trade with their model that demonstrates that even if production combinations are the same, trade will still result in higher levels of consumption (Krugman *et al.* 2012, 24–80).

The Ricardian and Neoclassical models demonstrate that the main reason for beneficial trade is the difference in the technology of production of the same goods across countries. Hecksher and Ohlin argued that even if the technology of production of the same goods across countries is the same, trade could still be beneficial because of the difference in factor endowments between countries. According to Hecksher and Ohlin, trade would be mutually beneficial if each country specializes in the production of the goods that uses its abundant factor of production intensively. Paul Samuelson’s extension of the Hecksher-Ohlin Theorem shows that international trade benefits a country’s abundant factor of production, either labour or capital, at the cost of the scarce factor of production (Krugman *et al.* 2012, 80–111).

Alfred Marshall introduced the concepts of Producer Surplus and Consumer Surplus, which are measures of producer welfare and consumer welfare. Protectionist policies of import tariffs and import quotas result in a dead weight loss of consumer surplus. This demonstrates that when governments introduce policies to hinder free trade, national welfare decreases. Free trade is, therefore, a more efficient choice than protected trade (Krugman *et al.* 2012, 199).

Krugman, Obstfeld, and Melitz explain that there are additional arguments for free trade, specifically, in the case of developing countries. Free trade can provide developing countries with the additional benefits of economics of scale, incentives for entrepreneurs to become more competitive and an increase in efficiency as free trade favours firms with higher productivity (Krugman *et al.* 2012, 221).

**Fair Trade**

While all of the above theories advocate for free trade as the best choice to increasing economic growth and welfare, countries do not practice truly free trade. The fair trade argument is an alternative to free international trade as
the best solution for economic growth. Proponents of fair trade believe that obstructed trade provides a better alternative than free trade (Kulkarni 2013). Kishore Kulkarni states that no country truly adopts free trade even if they promote free trade in other countries. For example, the United States maintains agricultural subsidies while encouraging free trade. Fair trade may actually be a better solution for developing countries that have been marginalized by trade with developed countries in the past (Kulkarni 2013). Glen Ruffle argues that in the era of globalization, the difference between winners and losers has greatly increased because of free trade. Free trade can help poor workers, but it is helping the rich at a much higher level, so inequality is increasing (Ruffle 2008, 37). Therefore, some forms of obstructed trade may actually increase welfare more than free trade.

**Regional Trade Agreements**

One form of protected trade is through preferential trade agreements. Jacob Viner proposed a custom union analysis to show the affect on welfare of a customs union in his publication The Customs Union Issue in 1950. Viner’s analysis assumes that the world is made up of three countries, of which two form a customs union and abolish tariffs. His analysis showed that the creation of a customs union resulted in trade creation and trade diversion. Trade creation is a measure of increased welfare because it occurs when one of the countries in the customs union is able to replace domestically produced goods with cheaper imports for consumers (Michaely 1976). Trade diversion is welfare decreasing because it diverts trade to less efficient producers. Viner’s analysis shows that preferential trade agreements do not necessarily provide increases in welfare like free trade does (Bhagwati 1993, 21).

Jagdish Bhagwati has argued that Regional Trade Agreements (RTAs) are welfare detracting and are not a desirable alternative to free trade for all. Bhagwati refers to RTAs as ‘stumbling blocks’ to multilateral free trade (Adhikari 2011, 13). According to Bhagwati, regionalism has the ability to improve trade or reduce trade immediately. Regionalism could result in stagnant time paths by leading to fragmentation, or it could result in multilateral free trade for all as the RTAs accelerate trade liberalization (Bhagwati 1993, 32).

Sherman Robinson and Karen Thierfelder conducted a multi-country computable general equilibrium model to study regional trade agreements (RTAs) and found that RTAs increase welfare. These studies indicate that these RTAs improve welfare; that trade creation greatly exceeds trade
diversion, and that they are consistent with further global liberalization (Robinson and Thierfelder 2002, 585). Robinson and Thierfelder state that neoclassical models are not adequate to show the gains from trade of RTAs, so they suggest the use of ‘new trade theory’ to better show the gains from increased trade under RTAs (Robinson and Thierfelder 2002, 596). New trade theory goes beyond neoclassical trade models and includes additional aspects like increasing returns, imperfect competition, and trade externalities to evaluate the impact of RTAs on welfare. New trade theory shows that when these additional aspects are included, RTAs result in more trade creation than trade diversion, and that often there is no trade diversion at all (Robinson and Thierfelder 2002, 597).

Adhikari states that while North–South RTAs are welfare enhancing, South–South RTAs are not for several different reasons. Many South–South RTAs do not have high levels of intraregional trade. Additionally, South–South RTA members often compete for the same markets for their exports. RTAs are costly to implement and they reduce tariff revenue for member nations (Adhikari 2011, 14–15).

However, Adhikari also points out that the arguments against South–South RTAs are not necessarily supported empirically. A 2003 study by Cernat used a gravity model to study the effects of seven South–South RTAs found that five of the seven RTAs were trade creating and even trade expanding to third countries (Adhikari 2011, 16). Additionally, empirical evidence shows that South–South RTAs also provide benefits in terms of intraregional investment through resource and technology transfers (Adhikari, 2011, 16).

**THE CASE OF NEPAL**

**Background**

Nepal is a south-eastern Asian country bordered by China to the North and India on the other three sides. Nepal has a population of over 26 million people, and 83% of the population lives in rural areas (World Bank 2013). The majority of the population is Hindu (CIA 2013). Nepal is the 13th poorest country in the world and the poorest country in South Asia (Feed the Future 2011). About one-fourth of the population lives below the poverty line (CIA 2013). The majority of the population works in agriculture. Nepal consists of the three geographical zones: the mountain, hill, and plain zones. Infrastructure is more developed in the hill zones than in the mountains, and the most urbanized area is located in the hill zone, while the mountains are more rural (CIA 2013).
Nepal has suffered from years of political unrest. From 1951 to 1990, Nepal had an absolute monarchy, and the country was a constitutional Hindu Kingdom (Dhakal et al. 2009). In 1990, Nepal introduced a multiparty democracy while still maintaining the rule of a constitutional monarchy. In 1996, a decade-long civil war broke out between the Nepal Communist Party and the government (MOHP 2012). About 13,000 people were killed in the civil war, and it led to displacement from rural areas. The fighting parties reached a peace agreement in 2006 and instituted an interim constitution. In 2008, Nepal became a democratic republic. Since 2008, multiple different coalition and interim governments have continued the political turmoil of the nation (MOHP 2012).

**Trade Characteristics**

Nepal faces unique barriers to trade because it is a landlocked country with poorly developed infrastructure and high transportation costs. In addition, it depends heavily on India for trade, which makes its trade situation especially vulnerable to changes in the Indian market. Nepal also suffered through a civil War beginning in 1996 and has experienced political turmoil ever since.

**Trade Liberalization**

Nepal followed trade liberalization according to Structural Adjustment Programs (SAPS) imposed as conditionalities by the International Monetary Fund (IMF) starting in 1986 (Karmacharya 2001, 89). During the 1990s, Nepal intensified trade liberalization by eliminating import quotas and greatly reducing tariff rates (Karmacharya 2001, 90). The average effective protection rate declined from about 112% in the late eighties to less than nine 9% in 1996" (Karmacharya 2001, 90). In 2005, the majority of imports had a tariff rate between 10% and 20% (Ramesh 2005, 1120). Table 1 below shows that Nepal had the lowest tariff rates as well as the lowest non-tariff measures by far in the South Asian region from 1991–1993. Import licenses are only required for goods that are restricted like liquor containing more than 60 per cent alcohol; beef products, and precious stones (Ramesh 2005, 1126). All but 16 items including forest products and oil cakes are free from export tariffs in Nepal (Ramesh 2005, 1123).
### TABLE 1: PROTECTION RATES IN SOUTH ASIA FROM 1991–1993

<table>
<thead>
<tr>
<th>Country</th>
<th>Weighted Average Tariff Rate (%)</th>
<th>Weighted Average Non-Tariff Measures in Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>62</td>
<td>81</td>
</tr>
<tr>
<td>India</td>
<td>20</td>
<td>54</td>
</tr>
<tr>
<td>Nepal</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Pakistan</td>
<td>38</td>
<td>65</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>29</td>
<td>21</td>
</tr>
</tbody>
</table>


### Trade with India

Nepal is heavily dependent on India for trade, and about 50% of its total trade is with India (Dhakal et al. 2009, 128). There are multiple reasons for Nepal’s dependence on India for trade. Nepal has an open border with India, which borders Nepal on the eastern, western, and southern sides of the country. Because Nepal is landlocked and neighbouring countries have underdeveloped infrastructure, the cost of transportation to trade with the rest of the world is very high (Karmacharya 2001, 89). Because of this integration with India, Nepal could not protect its infant industries against Indian competitors, and Nepal was affected by India’s highly protectionist system. In addition, Nepal adopted a protectionist system very similar to India’s (Karmacharya 2001, 89). The dependence of Nepal on India for trade makes Nepal especially vulnerable to changes in the Indian market (Sharma 2002, 37).

### Trade Volume

After Nepal enacted trade liberalization policies, exports as a percentage of GDP increased. In 1990, the export was 5.3% of the GDP. This value increased during the 90s, peaking at 10.3% in 1994 (Karmacharya 2001, 92). This rise during the 90s occurred as a result of an increase in exported services rather than exported goods as can be seen in Table 2. Nepal’s export goods have been undiversified and carpets and garments alone accounted for nearly 80% of all exported goods in 1994 (Karmacharya 2001, 93). In 2002, imports were more than double the amount of exports in Nepal (Sharma 2002, 41).
**Table 2: Export Growth Rates in Nepal**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>4.80</td>
<td>5.02</td>
<td>3.98</td>
</tr>
<tr>
<td>Industry</td>
<td>4.10</td>
<td>1.55</td>
<td>3.22</td>
</tr>
<tr>
<td>(Manufacturing)</td>
<td>5.19</td>
<td>14.03</td>
<td>5.72</td>
</tr>
<tr>
<td>Services</td>
<td>5.32</td>
<td>7.44</td>
<td>4.78</td>
</tr>
<tr>
<td>(Trade, restaurants, hotels)</td>
<td>4.37</td>
<td>7.54</td>
<td>3.94</td>
</tr>
<tr>
<td>(Finance and real estate)</td>
<td>5.21</td>
<td>6.36</td>
<td>5.91</td>
</tr>
<tr>
<td>(Other services)</td>
<td>6.06</td>
<td>8.01</td>
<td>4.69</td>
</tr>
</tbody>
</table>


**South Asian Free Trade Area**

The South Asian Free Trade Area (SAFTA) is a free trade agreement between both developing countries and Least Developed Countries (LDCs) in South Asia that was enacted in 2006. Bangladesh, Nepal, Afghanistan, Bhutan, and Maldives are the five LDCs in the agreement. SAFTA also includes the developing countries of Pakistan, India, and Sri Lanka. SAFTA focuses on free trade for goods only. SAFTA is not purely a free trade agreement because each country maintains a sensitive list to protect certain goods. The sensitive lists include 53% of the actively traded goods in South Asia (Adhikari 2011, 30).

Table 3 shows basic information about the five LDCs in SAFTA. Nepal has a fairly high GDP growth rate at 5%; however, GDP per capita is still very low at only $438 per person. The only LDC in the region with a lower GDP per capita is Afghanistan. Nepal’s merchandise trade to GDP percentage is 45%, which is the least open trade ratio of all the LDCs in the agreement (Adhikari 2011, 25). These LDCs face unique challenges in trade integration. Within South Asia, LDCs are the worst performing countries in their level of trade integration; both globally and regionally, despite the generous preferential market access opportunities available to them’ (Adhikari 2011, 24). The challenges they face toward trade integration include being able to competitively enter the Indian market, lacking a comparative advantage in manufacturing, and being competitive in the context of multiple intraregional and transregional trade agreements in South Asia (Adhikari 2011, 24).
TABLE 3: CHARACTERISTICS OF LDCS IN SAFTA

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Land area (sq.km)</th>
<th>GDP (Current $ million)</th>
<th>Annual GDP Growth Rate (%)</th>
<th>GDP per Capita (Current International Dollars)</th>
<th>Impacts of Goods and Services (% of GDP)</th>
<th>Exports of Goods and Services (% of GDP)</th>
<th>Trade (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>29.02</td>
<td>652,090</td>
<td>10,624</td>
<td>2</td>
<td>366</td>
<td>53</td>
<td>17</td>
<td>70</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>160.00</td>
<td>130,170</td>
<td>79,554</td>
<td>6</td>
<td>497</td>
<td>29</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>Bhutan</td>
<td>0.69</td>
<td>38,394</td>
<td>1,283</td>
<td>14</td>
<td>1,869</td>
<td>51</td>
<td>56</td>
<td>107</td>
</tr>
<tr>
<td>Maldives</td>
<td>0.31</td>
<td>300</td>
<td>1,261</td>
<td>5</td>
<td>4,135</td>
<td>110</td>
<td>83</td>
<td>194</td>
</tr>
<tr>
<td>Nepal</td>
<td>28.81</td>
<td>143,350</td>
<td>12,615</td>
<td>5</td>
<td>438</td>
<td>33</td>
<td>12</td>
<td>45</td>
</tr>
</tbody>
</table>


The LDCs in the region are very dependent on intraregional trade. Table 4 shows that intraregional trade makes up 63.27% of Nepal’s total global trade. Bhutan is the only country in the agreement with a higher dependence on intraregional trade than Nepal. Because of SAFTA, the LDCs are increasing their imports from the region more rapidly than their exports to the region are increasing (Adhikari 2011, 22). As Fig. 5 shows, Nepal’s share of intraregional exports fell from 10.7% in 2000 to 5.97% in 2008, which is a negative 44.21% change in export share (Adhikari 2011, 23).

TABLE 4: INTRAREGIONAL TRADE IN SAFTA COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th>Intraregional Trade (US$ Million)</th>
<th>Share in Intraregional Trade (%)</th>
<th>Global Trade (US$ Million)</th>
<th>Share of Intraregional Trade in Global Trade (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>2,506</td>
<td>8.24</td>
<td>6,159</td>
<td>40.69</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>4,347</td>
<td>14.30</td>
<td>37,724</td>
<td>11.52</td>
</tr>
<tr>
<td>Bhutan</td>
<td>335</td>
<td>1.10</td>
<td>409</td>
<td>81.80</td>
</tr>
<tr>
<td>India</td>
<td>11,859</td>
<td>39.01</td>
<td>491,168</td>
<td>2.41</td>
</tr>
<tr>
<td>Maldives</td>
<td>234</td>
<td>0.77</td>
<td>1,627</td>
<td>14.36</td>
</tr>
<tr>
<td>Nepal</td>
<td>2,990</td>
<td>9.84</td>
<td>47,276</td>
<td>63.27</td>
</tr>
<tr>
<td>Pakistan</td>
<td>4,191</td>
<td>13.79</td>
<td>67,800</td>
<td>6.18</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>3,939</td>
<td>12.96</td>
<td>22,730</td>
<td>17.33</td>
</tr>
<tr>
<td>Total</td>
<td>30,401</td>
<td>100</td>
<td>632,343</td>
<td>4.81</td>
</tr>
</tbody>
</table>

Table 5: Percentage Change in Intraregional Trade of SAFTA Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Exports to the Region (US$ Million)</th>
<th>Imports from the Region (US$ Million)</th>
<th>Share in Intraregional Exports (%)</th>
<th>Percentage Change 2000–2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>60</td>
<td>175</td>
<td>169</td>
<td>2,331</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>93</td>
<td>431</td>
<td>1,050</td>
<td>3,916</td>
</tr>
<tr>
<td>Bhutan</td>
<td>-</td>
<td>164</td>
<td>-</td>
<td>171</td>
</tr>
<tr>
<td>India</td>
<td>1,820</td>
<td>9,449</td>
<td>454</td>
<td>2,410</td>
</tr>
<tr>
<td>Maldives</td>
<td>14</td>
<td>18</td>
<td>90</td>
<td>216</td>
</tr>
<tr>
<td>Nepal</td>
<td>309</td>
<td>881</td>
<td>587</td>
<td>2,110</td>
</tr>
<tr>
<td>Pakistan</td>
<td>404</td>
<td>2,919</td>
<td>291</td>
<td>1,272</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>190</td>
<td>725</td>
<td>707</td>
<td>3,213</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,890</strong></td>
<td><strong>14,762</strong></td>
<td><strong>3,348</strong></td>
<td><strong>15,638</strong></td>
</tr>
</tbody>
</table>


Additionally, the LDCs are dependent on Pakistan and India for their intraregional trade. For example, over 90% of Nepal’s total exports in the region are to India, and 99.66% of imports to Nepal from the region are from India (Adhikari 2011, 31). This dependence on trade with India is problematic because India maintains high levels of Most Favored Nation (MFN) tariffs against the LDCs. For example, the weighted average of MFN tariffs on imports from Nepal to India is 22.5% (Adhikari 2011, 31–32).

Table 6 shows that the trade deficits of the LDCs in SAFTA also increased after the free trade agreement, while the trade surpluses in India and Pakistan increased as a result of the free trade agreement. Nepal’s trade deficit increased from negative 278 in 2000 to negative 1,229 in 2008. At the same time, India’s trade surplus increased from 1,366 to 7,039. This trade asymmetry is marginalizing for Nepal (Adhikari 2011, 74).

Table 6: Trade Balances of SAFTA Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>2000</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exports</td>
<td>Imports</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>60</td>
<td>169</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>93</td>
<td>1,050</td>
</tr>
<tr>
<td>Bhutan</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>India</td>
<td>1,820</td>
<td>454</td>
</tr>
<tr>
<td>Maldives</td>
<td>14</td>
<td>90</td>
</tr>
<tr>
<td>Nepal</td>
<td>309</td>
<td>587</td>
</tr>
<tr>
<td>Pakistan</td>
<td>404</td>
<td>291</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>190</td>
<td>707</td>
</tr>
</tbody>
</table>

Welfare

Economists have championed free trade as a tool to galvanize growth. According to trade theory, international trade should bring an increase in welfare to trading nations. Nepal has the lowest tariffs in the entire region of South Asia and underwent an extensive trade liberalization process in the late 1980s and early 1990s. However, the effects of SAFTA could actually marginalize and harm Nepal because of the structure of the preferential trade agreement that favours the more developed countries in the agreement. An evaluation of economic growth, income inequality, and poverty in Nepal can show how welfare has changed since trade liberalization policies were enacted.

Economic Growth

From 1990 to 2001, Nepal experienced higher levels of economic growth as a result of trade liberalization. During this period, aggregate GDP increased by 5.3% per year (Dhakal et al. 2009, 129). However, since this initial increase in economic growth, the growth has been unimpressive in Nepal (Dhakal et al. 2009, 130). Since SAFTA was enacted in 2006, Nepal has experienced moderate levels of economic growth, peaking at 6.1% in 2008. GDP per capita has nearly doubled in the period after trade liberalization, but it still remains very low.

Table 7: GDP Growth in Nepal

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP (Constant 2005 US$)</th>
<th>GDP Per Capita (Constant 2005 US$)</th>
<th>GDP Growth (Annual %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>3,382,193,773</td>
<td>210</td>
<td>6.1</td>
</tr>
<tr>
<td>1986</td>
<td>3,536,612,921</td>
<td>214</td>
<td>4.6</td>
</tr>
<tr>
<td>1987</td>
<td>3,596,580,376</td>
<td>213</td>
<td>1.7</td>
</tr>
<tr>
<td>1988</td>
<td>3,873,402,287</td>
<td>224</td>
<td>7.7</td>
</tr>
<tr>
<td>1989</td>
<td>4,041,106,970</td>
<td>229</td>
<td>4.3</td>
</tr>
<tr>
<td>1990</td>
<td>4,228,413,747</td>
<td>233</td>
<td>4.6</td>
</tr>
<tr>
<td>1991</td>
<td>4,497,685,494</td>
<td>242</td>
<td>6.4</td>
</tr>
<tr>
<td>1992</td>
<td>4,682,378,749</td>
<td>246</td>
<td>4.1</td>
</tr>
<tr>
<td>1993</td>
<td>4,862,643,307</td>
<td>249</td>
<td>3.8</td>
</tr>
<tr>
<td>1994</td>
<td>5,262,158,213</td>
<td>262</td>
<td>8.2</td>
</tr>
<tr>
<td>1995</td>
<td>5,444,673,640</td>
<td>264</td>
<td>3.5</td>
</tr>
<tr>
<td>1996</td>
<td>5,734,781,324</td>
<td>272</td>
<td>5.3</td>
</tr>
<tr>
<td>1997</td>
<td>6,024,308,211</td>
<td>278</td>
<td>5.0</td>
</tr>
<tr>
<td>1998</td>
<td>6,206,024,811</td>
<td>280</td>
<td>3.0</td>
</tr>
<tr>
<td>1999</td>
<td>6,479,870,202</td>
<td>286</td>
<td>4.4</td>
</tr>
<tr>
<td>2000</td>
<td>6,881,622,155</td>
<td>297</td>
<td>6.2</td>
</tr>
<tr>
<td>2001</td>
<td>7,211,923,684</td>
<td>305</td>
<td>4.8</td>
</tr>
<tr>
<td>2002</td>
<td>7,220,597,241</td>
<td>300</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Table 7(Contd.)...
Income Distribution

Income inequality in Nepal increased after the initial introduction of trade liberalization policies in the country in the late 1980s and early 1990s. Table 10 below shows the Gini Coefficient for rural and urban areas in Nepal. A Gini Coefficient nearer to one indicates high levels of inequality, while a Gini Coefficient closer to zero represents a more equal society. Table 8 shows that the increase in income inequality during this period occurred mostly in urban areas (Karmacharya 2001, 98). Overall, from 1985 to 1996, inequality increased in Nepal from a low level of .24 to a more moderate level of inequality at .34 (Larmacharya 2001, 98).

Table 8: Inequality in Nepal from 1985 to 1996

<table>
<thead>
<tr>
<th>Year</th>
<th>Rural Areas</th>
<th>Urban Areas</th>
<th>Nepal</th>
</tr>
</thead>
<tbody>
<tr>
<td>19851</td>
<td>0.23</td>
<td>0.26</td>
<td>0.24</td>
</tr>
<tr>
<td>19962</td>
<td>0.31</td>
<td>0.43</td>
<td>0.34</td>
</tr>
</tbody>
</table>


Table 9 uses different data to show the Gini index and income share by quintiles in Nepal over the period of 1985 to 2010. Trade liberalizations in Nepal occurred during this time, and SAFTA was enacted in 2006, so its effects can be seen in the data for 2010. While the Gini index increases from 1985 to 2003, it decreases from 2003 to 2010, which indicates that income distribution in society became more equal after 2003. Inequality in 2010 is still higher than the 1985 level, but the difference is very small. The breakdown of income distribution by quintile shows that the bottom four quintiles all decreased their shares of national income from 1985 to 2003. This loss was compensated by a gain in the highest income quintile from 39.5% in 1985 to 50.98% in 2010. However, the highest income quintile decreased their share of national income from 50.98% in 2003 to 41.46% in 2010. The four lower income groups all gained some share of this income in
2010 making the overall income distribution in the country more equal. It is important to note though that the richest 20% of the population still controls nearly double the income of the next highest 20% of the population. In 2010, the bottom 20% of the population only controlled 8% of the national income, and the second lowest 20% only controlled 12% of national income. This level of income share for these two groups is lower in 2010 than it was in 1985 before trade reforms. This shows that the benefits of trade liberalization have increased welfare for the richest groups in the society, and have failed to improve the situation of the poorer segments of society.

| Table 9: GINI Index and Income Distribution by Quintile in Nepal |
|---------------------|--------|--------|--------|--------|
| Indicator            | 1985   | 1996   | 2003   | 2010   |
| GINI index           | 30.06  | 35.23  | 43.83  | 32.82  |
| Income share held by highest 20% | 39.5   | 43.52  | 50.98  | 41.46  |
| Income share held by fourth 20%   | 21.82  | 21.14  | 19.42  | 21.89  |
| Income share held by third 20%    | 16.68  | 15.71  | 13.45  | 16.22  |
| Income share held by second 20%   | 12.89  | 11.76  | 9.62   | 12.16  |
| Income share held by lowest 20%   | 9.11   | 7.87   | 6.53   | 8.27   |


Poverty

The increase in overall poverty in Nepal shows that while trade liberalization has led to higher economic growth, this growth was not pro-poor (Acharya and Cohen 2008, 1057). In sum, the globalization process seems to have bypassed a large part of the rural poor although some improvement has occurred in the urban sector and has had its positive spillover effect on some of the neighboring rural areas’ (Karmacharya 2001, 99). Trade liberalization and globalization have encouraged growth in the urban-based non-agricultural sector, so this could explain the decrease in poverty in urban areas in the early period of trade liberalization in the late-1980s and early-1990s (Karmacharya 2001, 100). Table 10 shows the decrease in the incidence of poverty in rural areas from 1985–1996. Despite this decrease, poverty in rural areas and overall poverty in the country increased during this period following trade liberalization reforms.

| Table 10: Incidence of Poverty in Nepal in 1985 and 1996 |
|-----------------------------|--------|--------|
| Rural Areas                 | 43.1   | 46.6   |
| Urban Areas                 | 19.2   | 17.8   |
| Nepal                       | 41.1   | 44.6   |

Table 11: Rural and Urban Poverty Incidence in Nepal in 1985 and 1996

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Urban</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984–1985</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terai</td>
<td>35.4</td>
<td>24.1</td>
<td>34.1</td>
</tr>
<tr>
<td>Hills</td>
<td>52.7</td>
<td>14.5</td>
<td>50.0</td>
</tr>
<tr>
<td>Mountains</td>
<td>44.1</td>
<td>-</td>
<td>44.1</td>
</tr>
<tr>
<td>Nepal</td>
<td>43.1</td>
<td>19.2</td>
<td>41.4</td>
</tr>
<tr>
<td>1995–1996</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terai</td>
<td>37.3</td>
<td>28.1</td>
<td>36.7</td>
</tr>
<tr>
<td>Hills</td>
<td>52.7</td>
<td>14.5</td>
<td>50.0</td>
</tr>
<tr>
<td>Mountains</td>
<td>62.4</td>
<td>-</td>
<td>62.4</td>
</tr>
<tr>
<td>Nepal</td>
<td>46.6</td>
<td>17.8</td>
<td>44.6</td>
</tr>
</tbody>
</table>


Table 11 shows the incidence of poverty by zone before trade liberalization in 1986 and after trade liberalization reforms in 1996. Poverty in the rural mountain region of Nepal—the poorest rural zone in the country—increased by nearly 20% during the time period. However, overall poverty in Nepal increased only slightly.

Gains from the vast trade reforms in Nepal failed to decrease overall poverty. While the urban sector did experience a decrease in poverty levels, the losses in rural areas offset these gains to result in an overall increase in poverty after trade liberalization (Pyakuryal et al. 2010).

Table 12 uses data from the World Development Indicators to show the poverty headcount ratios at the rural, urban, and national levels for 1996, 2003, and 2010. To calculate these ratios, different levels of poverty are used as the baseline for the poverty line in rural, urban, and national calculations. The World Development Indicators used data from Nepal’s Central Bureau of Statistics to calculate these levels. After 1996, poverty levels in rural areas continue to be higher than poverty levels in urban areas (Pyakuryal 2010). This shows that while trade liberalization has brought growth to Nepal, the effects have largely benefited the urban sector and not the rural sector.

Table 12: Poverty Headcount Ratio in Nepal in 1995, 2003 and 2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>43.3</td>
<td>34.6</td>
<td>27.4</td>
</tr>
<tr>
<td>2003</td>
<td>21.6</td>
<td>9.6</td>
<td>15.5</td>
</tr>
<tr>
<td>2010</td>
<td>41.8</td>
<td>30.9</td>
<td>25.2</td>
</tr>
</tbody>
</table>

CONCLUSION

Nepal drastically liberalized trade in the late-1980s and early-1990s, and it currently has the lowest tariff rates in South Asia. Nepal is also a member of multiple regional trade and bilateral trade agreements, and it joined SAFTA in 2006. SAFTA has had a marginalizing effect on Nepal’s trade. While economic growth did moderately increase after trade liberalization in Nepal, poverty in rural areas remains much higher than urban areas, and the richest quintile of the population of Nepal controls nearly double the wealth of the next richest segment of the population. Therefore, growth as a result of trade liberalization has benefited the urban sector and richest segment of the population, and the gains from trade in Nepal have not been pro-poor or rural. Increased international trade has brought gains to Nepal, but they have not been distributed across the population.

REFERENCES

Awareness about Impact of Work Stress: An Empirical Study

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Abstract—The objective of this survey based descriptive research is to understand the level of awareness of sanitary workers about impact of work stress on health related problems. The study has sampled sanitary workers from private multi-speciality hospitals in Tirunelveli city, Tamil Nadu. A percentage analysis method has been administered to analyze profile of the respondents and weighted average method has been employed to analyze awareness of sanitary workers about impact of stress on health related problems. The result of the study has explained that majority of the respondents have not known anything about the impact of work stress on health related problems. The study has given suggestion to improve the awareness level of sanitary workers about impact of work stress on health related problems.

Keywords: awareness, impact, work stress, sanitary workers, Tirunelveli city

INTRODUCTION

Background of the Study

Stress refers to an individuals’ reaction to a situation or aspect of the environment that is perceived as stressful and a threat to one’s well-being (Lazarus and Folkman, 1984). Stress at work has been measured as a variety of affective responses to the environment, including anxiety, depression, irritability and worry (Hurrell et al. 1998).

Sanitary workers, the non-medical employees has occupied major role in hospital. They assist medical, paramedical and other non-medical staffs in a number of ways. It is the responsibility of the sanitary workers to bring the patients from ambulance, emergency ward and other areas of the hospital to the physician room through either wheel-chair or stretcher for medical treatment. Thus, they assist to the physicians. It is also the duty of the sanitary workers to prepare the patients for surgical treatment in such a way that they shave the hair in the surgical area and move the patients by stretcher to the operation theatre. Furthermore, they assist the paramedical personnel such as nursing, pharmacists, laboratory technicians and radiographers in such a way that they carry the blood samples, urine samples and x-ray and other investigation reports of the patients from the ward and radiology department to the concerned diagnostics departments and consultants’ rooms.
Their daily work is fully physical oriented. Their work comprises cleaning of hospital, mopping floor, gardening work and washing the clothes which are used in operation theatre and path lab. In most of the hospitals, all these activities are done manually instead of machines. It is important to pinpoint here about the informal work performed by the sanitary workers. They perform a number of works which have not been given in their job description. In many hospitals, they are sent to owner’s house, doctors and higher officers’ house to do their house-related work such as cleaning vessels, washing clothes, gardening, security work and their other personal work. Their illiteracy forces them to work in a submissive manner. This manual work and informal work definitely causes stress and affect their health.

The study area has reached considerable development in the past few years. Though, the hospitals have provided employment opportunities for sanitary workers, they are working and living under stressful conditions because of lack of education, poor salary, inadequate respect and recognition, high work load and the like. Moreover, absenteeism is highly seen among sanitary workers as they undergo health-related issues very frequently because of their poor education and their nature of work.

As the sanitary workers play a major role in controlling and preventing the infections which arise because of cleanliness, it is it is essential to maintain their health in a good condition. Hence, it is necessary to educate the sanitary workers about the effect of stress and importance of maintaining good health. In view of these reasons, the present research is undertaken to understand the level of awareness of sanitary workers about impact of work stress on health related issues.

**Statement of the Problem**

**Stress comprises of two types**: eustress and distress. Eustress is the positive stress and it motivates a person. Distress is the negative one and it affects the health of a person. It is unavoidable and one has to undergo stress in the work place. There are a number of factors that cause stress in the work place. Personality of a person, work load, working hours, attitude of superiors, co-workers and subordinates, inadequate resources, leadership style are some of the causative factors of stress. Furthermore, stress affects health in a number of ways. Headache, digestive problems, palpitation, sleeplessness, loss of appetite, weight loss, hair loss, hypertension, diabetes mellitus and other similar disorders are effects of stress.
It is important for all employees to know that stress is one of the important sources of all these health issues. The awareness of the employees about these health issues will drive them to follow some precautionary or preventive steps toward stress. Educated peoples have a number of resources to know about the impact of stress on health issues. Books, websites, newspaper, and the like will help them to know about various side effects of stress and the way of managing the same. At the same time, for illiterates like sanitary workers, it is essential to educate about how far stress affects their health and how to manage it in the workplace as well as outside. Hence, it is inevitable to know about their level of awareness about the causes and impact of stress in order to provide them training and development programmes, for the development of their knowledge. In view of this requirement, the present study is undertaken with the objectives of analyzing the levels of awareness of the sanitary workers and the impact of stress on health-related issues. Other suitable suggestions are made to improve their awareness.

Scope of the Study
This research has covered Tirunelveli city. The study has focussed on the sanitary workers working in private multi-speciality hospitals in Tirunelveli city. Level of awareness of the sanitary workers about the impact of stress on health has been studied. Any other occupational group in the hospitals has not been included in this study.

Significance of the Study
The study has analyzed the level of awareness of sanitary workers about effect of work stress on their health. The findings of this study will be helpful for them to what ill-effects of stress are, and how much they have known about them. The suggestions given by the researcher will provide an opportunity to develop their knowledge about the effects of stress and how to manage the stress to prevent undergoing stress. The findings will also be helpful for hospital management to know about the knowledge of their employees in terms of effect of stress on health and to take necessary steps to educate them about the means of organizing suitable training and development programme. This study will serve as source of secondary data for future research studies.

Profile of the Study Area
This study has been undertaken in Tirunelveli city. Tirunelveli, also known as Nellai, and historically (during British rule) as Tinnevelly, is a city in the
Indian state of Tamil Nadu. It is the headquarters of the Tirunelveli District in Tamil Nadu and is situated 700 kilometres (435 miles) southwest of the state capital Chennai. It is located in the southern-most tip of the Deccan plateau. Tirunelveli is an important junction on the National Highway 7 connecting India from the north to south (Kashmir to Kanyakumari). As of 2011, census of India, Tirunelveli has a total population of 474,838. Males constitute 49% of the population, and females 51%.

**Objectives of the Study**

The objectives of this research work are to understand the level of awareness of sanitary workers towards impact of work stress on health-related issues and to provide suitable suggestions to improve their awareness level about the same.

**Limitations of the Study**

The present study is limited to Tirunelveli city alone and it has not covered entire Tirunelveli district. The study has covered the sanitary workers working in private multi-speciality hospitals alone and it has not studied the sanitary workers working in single-speciality hospitals and government hospitals. The sampling technique is also another limitation of this study. The researcher has adopted both convenient and judgement sampling techniques. Moreover, the present research has not studied about level of awareness of causes of work stress and coping strategies of work stress. Hence, caution is necessary in generalizing the results of this research.

**REVIEW OF RELATED LITERATURE**

Occupational stress is defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, responses, or need of the worker (National Institute for Occupational Safety and Health, 1999).

Workplace stress or job stress is defined as any characteristic of the job environment that poses a threat to the individual, either excessive demands or insufficient supplies to meet the need and lead to a rising tension in a person (Hinshaw, 1993; Edwards, 1995).

According to the World Health Organization 1948, ‘Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity’ (Park K. 2000).
There is strong indirect evidence that stress affects human health. It is also assumed that there is a strong relationship between working experiences and psychological and emotional responses (Ganster, D.C. and J. Schaubroeck, 1991).

Stress related physical illness include heart disease, migraines, hypertension, irritable bowel syndrome, muscle, back and joint pain and duodenal ulcer (Wong D. et al. 2001), coronary heart diseases and cancer (Cohen S. and M. Williamson, 1991). Short term symptoms include headaches, muscular tension, chest pains, indigestion, palpitations, disturbed sleep and increased susceptibility to respiratory infections. Long term illnesses attributable to work-related stress include high cholesterol and increased risk of cancer, diabetes and asthma (CSP, 2004).

Psychological problems such as anxiety, tiredness, job dissatisfaction, depression and even physiological ailments like high blood pressure, constant malaria, and headache are the result of stress. Psychological problems that are frequently brought on by work-related stress include: fatigue, low self-esteem, irritability, depressive and acute anxiety disorders and post traumatic stress disorder (CSP, 2004).

Agarwal M. and Deepika Jasuja (2013) analyzed the stress level of different occupational groups: namely, business, IT sectors, education, agriculture, pharmacy, property, banking and legal job before and after the stress management given. Before stress management techniques were given, stress level of employees group was as follows: business > 70%, IT sector > 65%, education > 40%, agriculture > 85%, pharmacy > 30%, property > 60%, banking > 50% and legal job > 35%. After the stress management techniques were taught the level of stress was measured and it showed as follows: business ≥ 5%, IT sector ≥ 3%, education ≥ 1%, agriculture ≥ 7%, pharmacy ≥ 2%, property ≥ 2%, banking ≥ 1% and legal job ≥ 1%.

Devi R. and D. Venkatarama Raju (2013) made a study, ‘A study on organizational stress of the employees at work place with reference to Chennai’. The result of the study revealed that lack of holiday, lack of promotion and incentives, increased work load, lack of job satisfaction, peer conflicts, suspension or dismissal from job, were the factors causing high stress. Results also showed that target pressure, heavy responsibility and superior pressure were the factors causing moderate stress. The hypothesis of the study proved that there was no significant relationship between gender and coping strategies, followed by employees in the organization.
Stafyla Amalia, Georgia Kaltsidou and Nikolaos Spyridis (2013) did a study ‘Gender differences in work stress related to organizational conflict and organizational constraints: An empirical research”. The study sampled 231 Greek adults including 94 men and 137 women. The result explained that males experienced more stress in interpersonal relationship and organizational constraints than female. Men had disagreements with their colleagues than women and also they had rude treatment from their colleagues. Men also had stress because of incorrect instructions, inadequate equipment or supplies or lack of necessary information and interruption than women.

Thaneswary Raveendran (2013) investigated leadership styles of administrators as perceived by employee’s job stress in the civil service organizations, Jaffna district. The results of the study indicated that job stress was found at medium level. Moreover, transformational leadership had significant effect on job stress. The respondents also reported that transformational leadership caused stress at lower level.

Aasia Manzoor et al., (2012) investigated the impact of work stress on job performance of textile sectors. The study has found that job ambiguity, pressure due to heavy work load, physical dangers and noise at work causing ringing in their ears, job insecurity, long work hours with undesirable timings and not getting much time to spend with their family were the sources of stress. Majority of the respondents reported that job stress has not affected their job performance and they have also said that they were able to work and record quickly and effectively and they were also willing to pay additional efforts to reach their targets, they were able to be a good team member and they could get along with their colleagues easily. The correlation table showed that no significant relationship existed between job stress and employee job performance.

Peter Arroja Eshun et al. (2012) studied occupational stressors within mining and banking industries in the Tarkwa mining area of Ghana. The study sampled 106 respondents using simple random sampling techniques. The study found that personality was the highest and working environment was the lowest source of stress. Desire to succeed and achieve results made more stress among mining workers. Similarly, social balance was the highest whilst working environment and task design was the lowest source of stress. Moreover, societal demand was the main cause of stress among bank workers. But, personality, task design, working environment and social balance were the source of stress among both mining and bank workers.
Rajan D. (2012) identified role and motivation related stressors, work shift and working hour related stressors, organization related stressors and sanitary workers' specific stressors and examined impact of the stress on individual life, especially at work place and health and family and social life of the sanitary workers and also analyzed the coping strategies being followed by the sanitary workers in Tirunelveli city. The findings of the study proved that receiving mixed and conflicting messages from the same person, long working hours and two-shift working system, lack of salary and performing multiple works at the same time were the topmost stressors of the sanitary workers. Tired, exhausted and having low energy and inability to spend time with family members were the foremost impacts of stress on individual and family and social life of the sanitary workers. Talking to someone was the foremost coping strategy being followed by sanitary workers.

Dar Laiba (2011) identified the role of different factors of job stress and to investigate the level of stress and demonstrate the effects of stress in the workplace. The findings of the study showed that job stress was caused due to the factors such as undervalued, workplace victimization or bullying, work–home interface, fear of joblessness, exposure of traumatic incidents at work and economic instability among the target population. The study demonstrated that stress resulted in poor concentration, mental block and poor decision-making skills. The result revealed a negative relationship between job stress and employee’s job performance and shows that job stress significantly decreases the employees’ job performance. The study explored the employees’ job performance with demographic variable resulting that male employees are highly stressed than female. The result also showed that male were used to more stress-bearing capacity than female and stress increases with the designation. The study has given suitable suggestions to reduce the stress at the workplace.

From the above discussed literature, it is clear that the study undertaken in the study area about the occupational stress of sanitary workers identified the causes and impact and coping strategies of occupational stress. The study did not analyze the awareness level of sanitary workers about the causes, impact and coping strategies of occupational stress. Hence, it is found that there is a gap in the study area to study about the awareness level of sanitary workers about the causes, impact and coping strategies of work stress. The present study analyzes the level of awareness of sanitary workers about the impact of work stress on health related problems.
RESEARCH METHODOLOGY

This survey based research work is descriptive in nature. The sample of this research is sanitary worker working in private multi-speciality hospitals. A total of 60 sanitary workers have been sampled from private multi-speciality hospitals using both convenient and judgement sampling techniques. The researcher has followed interview schedule method to collect primary data using structured questionnaire which was constructed by the researcher. The questionnaire consists of two sections, section ‘A’ that dealt with demographic variables of the respondents and section ‘B’ which talked about the level of awareness on the impact of sanitary workers. The questionnaire had been made with five point scale namely ‘I know very much’, ‘I know somewhat’, ‘Neutral’, ‘I know very less’ and ‘I do not know anything’ and these scales have been allocated the points as follows: 5, 4, 3, 2 and 1 respectively. The questions were translated for them in Tamil language and their answer was marked in the questionnaire by the researcher. Personal observation and discussion with sanitary workers was also undertaken with sanitary workers to collect primary data. The secondary data have been collected from journals, books and websites. Percentage analysis has been administered to analyze demographic variables of the respondents and weighted average technique has been employed to analyze level of awareness towards impact of work stress on health-related problems.

ANALYSIS AND RESULTS

It could be indicated from Table 1 that among the respondents, 16.67% are male and 83.33% are female, 96.67% of the respondents are married and 3.33% are unmarried. A total of 10% of the respondents are below 25 years of age, 25% are between 25 and 35 years of age, 41.67% are between 35 to 45 years of age and 23.33% of the respondents are above 45 years of age. Moreover, 10% of the respondents were below 2 years of experience, 38.33% were between 2 and 4 years of experience, 30% were between 4 and 6 years of experience and 30% of the respondents had above 5 years of experience. Above all, 36.67% of respondents were drawing below Rs. 4000 of salary, 55% between Rs. 4000 to 6000, 8.33% between Rs. 6000 to 8000 and no one were drawing above Rs. 8000 of salary.
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Measure</th>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sex</td>
<td>Male</td>
<td>10</td>
<td>16.67</td>
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<td></td>
<td></td>
<td>Female</td>
<td>50</td>
<td>83.33</td>
</tr>
<tr>
<td>2</td>
<td>Marital status</td>
<td>Married</td>
<td>58</td>
<td>96.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unmarried</td>
<td>02</td>
<td>3.33</td>
</tr>
<tr>
<td>3</td>
<td>Age</td>
<td>Below 25 years</td>
<td>06</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 25 and 35 years</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 35 and 45 years</td>
<td>25</td>
<td>41.67</td>
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<tr>
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<td></td>
<td>Above 45 years</td>
<td>14</td>
<td>23.33</td>
</tr>
<tr>
<td>4</td>
<td>Years of working experience</td>
<td>Below 2 years</td>
<td>06</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 2 and 4 years</td>
<td>23</td>
<td>38.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 4 and 6 years</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 6 years</td>
<td>13</td>
<td>21.67</td>
</tr>
<tr>
<td>5</td>
<td>Income level (Rs)</td>
<td>Below 4000</td>
<td>22</td>
<td>36.67</td>
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<tr>
<td></td>
<td></td>
<td>Between 4000 and 6000</td>
<td>33</td>
<td>55</td>
</tr>
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<td></td>
<td></td>
<td>Between 6000 and 8000</td>
<td>05</td>
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<td></td>
<td></td>
<td>Above 8000</td>
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Source: Primary data

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Measures</th>
<th>I Know Very Much</th>
<th>I Know Somewhat</th>
<th>Neutral</th>
<th>I Know Very Less</th>
<th>I do not Know Anything</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sleeping disorder (e.g. disturbed sleeping, difficulty in getting sleeping, waking in very early morning)</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>25</td>
<td>30</td>
<td>103</td>
</tr>
<tr>
<td>2</td>
<td>Headache including migraine</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>18</td>
<td>32</td>
<td>112</td>
</tr>
<tr>
<td>3</td>
<td>Stomach problem (stomach upset or stomach ache and duodenal ulcer)</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>20</td>
<td>35</td>
<td>98</td>
</tr>
<tr>
<td>4</td>
<td>Restlessness</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>15</td>
<td>39</td>
<td>95</td>
</tr>
<tr>
<td>5</td>
<td>Hair loss</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>41</td>
<td>101</td>
</tr>
<tr>
<td>6</td>
<td>Tired and exhausted</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>15</td>
<td>37</td>
<td>105</td>
</tr>
<tr>
<td>7</td>
<td>Fatigue and low energy</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>14</td>
<td>40</td>
<td>95</td>
</tr>
<tr>
<td>8</td>
<td>Respiratory problem</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>15</td>
<td>34</td>
<td>113</td>
</tr>
<tr>
<td>9</td>
<td>Poor appetite</td>
<td>5</td>
<td>7</td>
<td>0</td>
<td>13</td>
<td>35</td>
<td>114</td>
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<tr>
<td>10</td>
<td>Palpitation</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>41</td>
<td>101</td>
</tr>
<tr>
<td>11</td>
<td>Tightened and tensed muscles</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>21</td>
<td>35</td>
<td>94</td>
</tr>
<tr>
<td>12</td>
<td>Rushing of blood to the head</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>11</td>
<td>46</td>
<td>81</td>
</tr>
</tbody>
</table>

Table 2 (Contd.)
...Table 2 (Contd.)

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>13</td>
<td>Dry mouth</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>19</td>
<td>35</td>
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<tr>
<td>14</td>
<td>Worry and feeling of isolation</td>
<td>7</td>
<td>9</td>
<td>0</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>15</td>
<td>Back pain</td>
<td>5</td>
<td>7</td>
<td>0</td>
<td>13</td>
<td>35</td>
</tr>
<tr>
<td>16</td>
<td>Digestive problems (indigestion and constipation)</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>17</td>
<td>Diabetes mellitus</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td>18</td>
<td>Hypertension</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td>19</td>
<td>Lose of weight</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td>20</td>
<td>Increased risk of cancer</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>12</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: Primary data

Table 2 explains the level of awareness of sanitary workers about impact of work stress on health-related problems. It can be witnessed from the Table that majority of the respondents had not known anything about impact of stress on health issues discussed in the Table. From the major response towards, 'I don't know anything' it is indicated that they are in need of health education in form of training and development about the impact of stress on health-related issues.

**SUGGESTIONS AND CONCLUSION**

**Suggestions**

As nature of work of sanitary workers is mainly physical, and since they are uneducated, they are very prone to develop stress. Hence, the hospital management should take necessary steps to improve awareness level of the sanitary workers about stress. Training and development programme containing health education should be organized and delivered at frequent intervals. It can be delivered in three phases. The content of the programme should be consisting of three aspects: namely, causes, impact and management of stress. The various causes of stress should be insisted in the first phase. In the second phase of the training and development programme, it should not be limited to educating about the health related problems arising as a result of stress. It should also be emphasized how stress affects their individual, family and social life. The health education programme should emphasize on various mild symptoms and other serious diseases which arise as a result of prolonged stress. The way of controlling and managing stress should be explained in third phase of training and development programme. The health education explaining about the causes, effects and coping methods should be given using various teaching aids such as film, picture and role playing as most of them are illiterate.
**Directions for Future Research**

The future research can be undertaken with large sample size and more number of variables covering entire district. The future study can also be undertaken including single-speciality hospitals and government hospitals. The awareness level of sanitary workers of multi-speciality hospitals can be compared with single-speciality or government hospitals. The future research can also be done using other sampling techniques such as simple random sampling or stratified random sampling and so on.

**CONCLUSION**

It is clear from findings of this study that majority of the respondents have not known anything about impact of work stress on health-related problems. Sound health is vital for delivering effective and efficient contribution towards the organization. Hence, it is the responsibility of the hospital management to enhance their employees’ awareness level by means of educating about various stress-related information like causes, impact and way of managing them so as to protect their health and prevent employee turnover. Similarly, it is also the responsibility of the individual employee to attend training and development programme organized by the hospital without fail, in order to improve their awareness level about the stress-related issues.

**REFERENCES**


Women Empowerment through Women Entrepreneurs in Rural Area in Small Scale: With Reference to Jamkhandi Taluka

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Abstract—Importance of women in each family is known to all. Indian culture and civilization is very much attached to women and her relationship. Therefore, INDIA is symbolized as Mother India (Bharat Mata). Women are known for their best characters like patience, endurance, love, affection, sympathy and generosity. During early Vedic period, women enjoyed high status and position in their family. They shared equal rights and responsibilities with the husband. A woman is regarded as indivisible part of her husband and therefore her presence and participation in all rituals is inevitable. After Independence all round efforts have been made to promote the welfare of women. The Indian Constitution declared India to be sovereign democratic republic based on four pillars of Justice, Liberty, Equality and Fraternity. This means to provide the following without gender discrimination:

1. Rights and Status,
2. Education,
3. Health,
4. Economic emancipation,
5. Welfare organization.

The position and functions of women differ from community-to-community, place-to-place. Therefore, women welfare programmes need to fulfill different needs of women of all communities. Though women share equally with men in population, they are treated unequally in all other aspects. Even in the modernized and sophisticated countries they are treated as subordinates to men.

The government of India has defined ‘women entrepreneurs based on women participation in equality and employment of a business enterprise.’ Accordingly, a women entrepreneur is defined as, ‘Enterprise owned and controlled by a women having a minimum financial investment of 51% of the capital and giving at least 51% of the employment generated in the enterprise to women.’

In India, entrepreneurship has been dominated by male governed economy, where the role of women as entrepreneurs has been negligible. However, presently pro-women entrepreneurs have been playing an increasingly important role in promoting growth and economic development of the country. Women entrepreneurship is also gaining increasing importance in relevant notification of public policy relevant. National governments and international organizations are coming to realize that promoting women economic development through women entrepreneurs plays an important role in economic growth, particularly at the grassroots level. Women entrepreneurship needs to be studied separately for the following two main reasons:

- Economic growth of the country.
- Need for women empowerment.
Though various efforts are being made to improve the status of women, yet women-folk could not take maximum advantage and benefit and remained still backward. Hence, it becomes necessary for the society and government to find out remedies for the problems of women entrepreneurship.

**Keywords:** Entrepreneurs, enterprise, economic growth, exploitation

### INTRODUCTION

Women play an important role in the family which is a basic unit of the society. Family is a strong force for social cohesion and integration and as such should be strengthened. The inadequate support to women and insufficient protection to their respective families affects society as a whole and undetermines efforts to achieve gender equality. In different cultural and social systems, various forms of family members must be respected. Women's social and economic contributions to the welfare of the family and the significance of maternity and fraternity continue to be inadequately addressed. Women also bear disproportionate share of household responsibilities: they are required to take care of her children, sick ones, and elderly family members. In order to achieve full partnership, both in public and private spheres, both men and women are required to reconcile and share equal work and family responsibilities.

The programmes support to enhance women opportunities, potential and activities need to have dual focus:

- The programmes are aimed to meet basic as well as specified needs of women, capacity to build development and empowerment.
- Gender mainstream in all programmes formulation and implementation activities.

It is very important to expand into new areas of programming to advance gender equality in resonance to current global challenges. Girls and women of all ages with any form of durability, or generally among the more vulnerable and marginalized sections of society. There is a need to take into account and address their concerns in all policy-making and programming. Special measures are needed at all levels to integrate them into the mainstream of development.

The effective and coordinated plans and programmes for the full implementation of women-oriented policies require a clear knowledge on the situation of women and girls. A clear research based knowledge and data disaggregated by sex, short and long, time-bound targets and measurable goals and follow-up mechanisms to assess the progress. Efforts are needed
to ensure capacity-building for all the actors involved in the achievement of these goals. Efforts are also needed at national level to increase transparency and accountability.

The women are being paid, underpaid and largely unpaid for their work in homes, factories, firms, farms and mines etc. Initially, women were restricted to only for 3’Cs—Cooking, Cleaning, and Caring the baby. A large number of women perform activities inside and outside the house regularly with efficiency. If women do not do these works regularly, daily activities do not run smoothly. Women’s household work is invisible as it is performed inside the four walls of their house. Their work is not recognized and remunerated. Women’s household works remain invisible as, it is ignored in estimating the national income. National income is defined as sum of total of all production means, creation of utility: like place, time, service etc. Women are continuously producing one or more of these utilities. Yet it is not included in the national income.

Women constitute only 15% of the total employment in organized sector of Maharashtra, Delhi, West Bengal, Uttar Pradesh, Tamil Nadu and Karnataka. Here women workers and employees get better wages, standard working hours and protection by the organization. The women working in unorganized sector are not getting these facilities.

The middle and poor class women participate in the labour force in unorganized sector. Here difference in age, structure of family, nature of work, culture and tradition affecting autonomy and control her fertility levels and child bearing rights. Here women have wage difference.

Even though women constitute about half of the population of India, yet they are being neglected for decades together as the main part of resources. According to the ‘2011 Census Report’, their contribution to the prosperity and economic development of the country is highly significant. Today, women can shift their ideas and creativity outside the four walls. Now they are engaged in various activities and show their talent and efficiency. In the 20th century, with increasing awareness about education and employment there is tremendous change in the attitude of working women in the society. Hence, the society has recognized that if women remain oppressed and exploited, there can be no development in the country. Even though women are mentally very strong, intellectually capable for holding any productive activity; yet we are not giving them chance for development of the country. This has made women get employment with unsatisfactory wages and working conditions, which has slowed down the economic empowerment of force in the country. It is not possible to solve the problem of unemployment
and underemployment of the women. Hence, all the states have evolved many schemes for them to create a sense of self-employment. As a result, the concept of self-help groups (SHG) promoting women entrepreneurship has become popular as a weapon of women empowerment.

Woman entrepreneurship can be defined as, ‘A small scale industrial unit/industry related service or business enterprise managed by one or more woman entrepreneurship in preparatory concerns in which she/they will individually or jointly have share capital of not less than 51% as a partnership shareholder/directors of private limited company, members of cooperative society.’

According to Webster’s Dictionary, the term entrepreneur—‘One who undertakes an enterprise, and becomes employer of an enterprise—a bold and risky undertaking, or an adventure. Various experts have defined the term ‘entrepreneurship’ and entrepreneurship may be—A person or of a group of persons who assumes risk, responsibility and undertakes an economic activity and provides goods, services and employment to the society.

Women play an important role in the family which is a basic unit of the society. Family is a strong force for social cohesion and integration and as such, should be strengthened. The inadequate support to women and insufficient protection to their respective families affect society as a whole and undermines efforts to achieve gender equality. In different cultural and social systems, various forms of family members must be respected. Women’s social and economic contributions to the welfare of the family and the significance of maternity and fraternity continue to be inadequately addressed. Women also bear disproportionate share of household responsibilities and care to be taken for her children, sick ones, and elderly family members. In order to achieve full partnership, both in public and private spheres, both men and women are required to reconcile and share equal work and family responsibilities.

The programmes support to enhance women opportunities, potential and activities need to have dual focus:

- The programmes aimed to meet basic as well as specified needs of women, capacity to build development and empowerment.
- Gender mainstream in all programmes formulation and implementation activities.
It is very important to expand into new areas of programming to advance gender equality in resonance to current global challenges. Girls and women of all ages with any form of durability, are generally among the more vulnerable and marginalized sections of society. There is a need to take into account and address their concerns in all policy-making and programming. Special measures are needed at all levels to integrate them into the mainstream of development.

The effective and coordinated plans and programmes for the full implementation of women-oriented policies require a clear knowledge on the situation of women and girls. A clear research-based knowledge and data disaggregated by sex, short and long, time-bound targets and measurable goals and follow-up mechanisms to assess the progress. Efforts are needed to ensure capacity-building for all the actors involved in the achievement of these goals. Efforts are also needed at national level to increase transparency and accountability.

**TABLE 1: DRY AND IRRIGATED LAND IN JKD TALUKA BEFORE AND AFTER 1991**

<table>
<thead>
<tr>
<th>Type of Farms</th>
<th>Before 1991</th>
<th></th>
<th>After 1991</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irrigated</td>
<td>Non-Irrigated</td>
<td>Total</td>
<td>Irrigated</td>
</tr>
<tr>
<td>Below 5 acres</td>
<td>35 %</td>
<td>65 %</td>
<td>100 %</td>
<td>92.5%</td>
</tr>
<tr>
<td>5-10 acres</td>
<td>45 %</td>
<td>55%</td>
<td>100 %</td>
<td>87.5%</td>
</tr>
<tr>
<td>Above 10 acres</td>
<td>52 %</td>
<td>48%</td>
<td>100 %</td>
<td>76.5 %</td>
</tr>
<tr>
<td>Total land of taluka</td>
<td>52 %</td>
<td>48 %</td>
<td>100 %</td>
<td>93%</td>
</tr>
</tbody>
</table>

*Source: Dept of Agriculture*

**OBJECTIVES OF THE STUDY**

- To know women actual participation in entrepreneurship in rural area.
- To know situation of women entrepreneurs in Jamakhandi taluka.
- To measure the socio-economic background and status of women entrepreneurs.
- To create awareness about scope of women empowerment, government plan and schemes.
- To know the obstacles to women entrepreneurs in rural area.
- To evaluate skilled and non-skilled women entrepreneurs in marketing their products.
RESEARCH METHODOLOGY AND DATA COLLECTION

This research is undertaken in Jamakhandi taluka of Bagalakot dist. Taluka consists of 3 hobali namely Jamakhandi, Savalagi and Teradal and 63 villages. Female population in taluka is 48% of the total population (2,26,052). Total population is 4,70,943 (2011 Census report). The primary data were collected through a survey by questionnaire method distributed randomly. From each hobali, a sample of 275 women entrepreneurs is taken from whom we collect the information. These collected samples are used for the final analysis.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Type of Entrepreneurs</th>
<th>No. of Samples</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Milk Dairy and its allied products manufacturer and sellers</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Bangle merchants, beauty parlour/Mehandi</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Home Industry/Food products</td>
<td>42</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Sweet mart/ Bakery,</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Vegetables and Fruit sellers</td>
<td>60</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>Tea stall/ Pan shop, Catering/ Mess</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Tailoring and Garments</td>
<td>38</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>General stores</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Perfume vendors</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Weavers/ Handcrafting</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>275</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: From field work

TESTING HYPOTHESIS

1. From above tables we would like to test if there is a relation between caste and education of entrepreneurs among the samples drawn by applying chi-square test (goodness of fit) at 5% level of significance.

<table>
<thead>
<tr>
<th>Caste</th>
<th>Illiterate/ Primary</th>
<th>High School</th>
<th>College/ Tech</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>80</td>
<td>30</td>
<td>95</td>
<td>115</td>
</tr>
<tr>
<td>Backward</td>
<td>23</td>
<td>17</td>
<td>07</td>
<td>58</td>
</tr>
<tr>
<td>Most Backward</td>
<td>12</td>
<td>11</td>
<td>0</td>
<td>102</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>205</strong></td>
<td><strong>47</strong></td>
<td><strong>23</strong></td>
<td><strong>225</strong></td>
</tr>
</tbody>
</table>

\( H_0 \): There is no association between the caste and education level.

Under \( H_0 \) to test \( x^2 \)—goodness of fit at 5% level of significance.

Corresponding expected frequencies are.
Women Empowerment through Women Entrepreneurs in Rural Area in Small Scale

<table>
<thead>
<tr>
<th></th>
<th>Illiterate/ Primary</th>
<th>High School</th>
<th>College/ Tech</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>86</td>
<td>43</td>
<td>76</td>
<td>205</td>
</tr>
<tr>
<td>Backward</td>
<td>20</td>
<td>10</td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td>Most Backward</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
<td><strong>58</strong></td>
<td><strong>101</strong></td>
<td><strong>275</strong></td>
</tr>
</tbody>
</table>

\[ \chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} \]

Chi-square calculated value is 36.97 at 8 d.f.

Corresponding table value 16.92 at 5% 8 d.f.

So, calculated value is greater than table value at 5% los.

Hence \( H_0 \) may be rejected at 5% level.

**Conclusion:** There is association between the caste and Education level.

2. From above tables we would like to test there is association between family support and structure of family by entrepreneurs among the samples drawn, by applying Chi-square test (2X2 Contingency table) at 5% level of significance.

<table>
<thead>
<tr>
<th>Family Support</th>
<th>Family Structure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Joint</td>
<td>Single</td>
</tr>
<tr>
<td>Yes</td>
<td>156</td>
<td>54</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>165</strong></td>
<td><strong>110</strong></td>
</tr>
</tbody>
</table>

**\( H_0 \):** There is no association between family support and structure of family Under \( H_0 \) to test \( x^2 \)-independency of attribute at 5% level of significance.

\[ x^2 = N(ad-bc)^2 \]

\[ (a+b)(c+d)(a+c)(b+d) \]

Calculated value is 75 at 1 d.f.

From table value 3.84, 5% 1 d.f.

So calculated value is more than table value at 5% los.

Hence \( H_0 \) may be rejected.

**Conclusion:** There is an association between family support and structure of family.
**Findings and Conclusion of Study**

- There is a change in the position of women in society relating to socio-economic status and promoting entrepreneurship activities in talukas, before the year 2000 and 2000 onwards.
- The inclination towards girl education in taluka has increased.
- Most poor women entrepreneurs are able to make their business successfully and repay the loan.
- Women from backward communities and lower castes have very little social and economic status. Their literacy level should be increased and they should be properly trained. Educational attainment and economic participation are the key constituents in ensuring the empowerment of women.
- Some women entering into the entrepreneurial process are facing the obstacles and challenges such as opportunity identification, opportunity exploitation and resources acquisition, weak social status, access to finance etc.
- The creation of govt. offices for women’s business ownership is one way to facilitate this. Such offices could have programme responsibilities such as providing women’s business centres, organizing information, seminars and meetings.
- Empowerment would become more relevant if women are educated, better informed and can take rational decisions.
- Women are actively involved in dairy farming, bakery, industry, vegetable selling, tailoring, garments etc.

**References**

Measuring the Performance of Banks:  
An Application of Analytic Hierarchy Process Model

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Abstract—The current study aims to develop a conceptual model for measuring the performance of the banks which includes both the financial as well as human aspect. The hierarchy of dimensions of performance has been created in the study. An attempt has also been made to measure the importance of the various dimensions of the performance of the banks using Analytic Hierarchy Process model. On the basis of banking experts’ responses, it can be concluded from the study that human aspect is more important than financial aspect while measuring the performance of the banks. Under human aspect, the corporate social responsibility is more important than customer satisfaction and employee satisfaction.

Keywords: Banks, Analytic Hierarchy Process, Financial aspect, Corporate Social Responsibility, Customer satisfaction, Performance.

INTRODUCTION

Indian banking sector has emerged as one of the strongest drivers of India’s economic growth. Positive changes witnessed in the last two decades have impacted every aspect of banking, ranging from regulatory standards to customer management. Indian banks adapting to the changing landscape along with the vision of the regulator and the government in shaping the future growth of banking were two of the noteworthy features of this transition [1]. The Indian banking system is among the healthier performers in the world, when compared with top three banks in total assets and in terms of return on assets. This sector is tremendously competitive and recorded as growing in the right trend [2]. The policy makers, which comprise the Reserve Bank of India (RBI), Ministry of Finance and related government and financial sector regulatory entities, have made several notable efforts to improve regulation in the sector. The banking sector now compares favourably with other sectors in the region on metrics like growth and profitability. While banks evolved their strategies in response to increasing competition and changing customer requirements, the regulator guided its growth with policies of gradual liberalization and benchmarking

105
the domestic system with the best in the world [3]. As the world recovers from the global financial crisis, Indian banking has remained resilient while continuing to provide growth opportunities. India has by-and-large been spared of global financial contagion due to the subprime turmoil for a variety of reasons. India’s growth process has been largely domestic demand driven and its reliance on foreign savings has remained around 1.5% in recent period. It also has a very comfortable level of foreign exchange reserves. The credit derivatives market is in an embryonic stage; the originate-to-distribute model in India is not comparable to the ones prevailing in advanced markets; there are restrictions on investments by residents in such products issued abroad; and regulatory guidelines on securitization do not permit immediate profit recognition. Financial stability in India has been achieved through perseverance of prudential policies which prevent institutions from excessive risk taking, and financial markets from becoming extremely volatile and turbulent [4] [5].

With the increased participation of new private sector and foreign banks, the Indian banking industry has become fiercely competitive. Competition will be further intensified with the proposed entry of new private players and non-banking financial companies (NBFCs). A few banks have established an outstanding track record of innovation, growth and value creation, reflected in their market valuation [6]. The changed competition and accounting environment compelled the commercial banks to provide unprecedented attention to cost cutting and supplementing fund-based income by fee-based income [7]. Commercial banks’ lending and deposit-taking business has declined in the recent years. Deregulation and new technology have eroded bank’s comparative advantages and made it easier for non-bank competitors to enter these markets. In response, banks have shifted their sales-mix towards non-interest income-by selling fee-based financial services such as mutual funds, by charging fees for services that used to be bundled together with deposit, or loan products. Earnings from fee-based products are more stable than loan-based earnings and fee-based activities reduce bank risk via diversification [8]. The cost of banking intermediation in India is higher and bank penetration is far lower than in other markets. India’s banking industry must strengthen itself significantly if it has to support the modern and vibrant economy which India aspires to be. While the onus for this change lies mainly with bank managements, an enabling policy and regulatory framework will also be critical to their success [9].
A diverse range of various studies have been conducted by the researchers for measuring the performance of the banks, which present different perspectives with regards to the performance of the banks in different countries. Traditional systems of performance evaluations of banks mostly uses the factors like return on assets (ROA) and return on investments (ROI) for measuring the financial performance of the banks. But today, intellectuals and managers of organization find that traditional systems of performance evaluation having been typically based on financial views are incomplete in evaluating overall Performance of organization and presenting effective feedback [10]. Using criterions as ROA/ROI or financial measurements present summary of organization’s activities during last tenure only, even by presentation of the best sample of performance results, it does not ensure the continuity of these results in the future. Excessive financial measurements may increase organization’s short term profit, but bring about losing competitive situation and threatens long-term profit. Principal power of valuation in banks is in its intangible assets (knowledge and ability of personals, relationship with customers), financial aspect is not able to evaluate intangible assets [11]. Non-financial criterions like customer’s satisfaction, employee’s satisfaction and corporate social responsibility can be necessary for strategic success of bank [12]. Customer satisfaction is the key to the profitability of retail banking, which is having a long term financial impact on the business of the banks [13]. Performance of the banks depends upon the efficiency and level of satisfaction of its human resources. High level of human capital efficiency and employee satisfaction leads to the high performance of the banks [14]. It has also been found by the researchers that the banks which adhere to be socially responsible in their routine activities, outperform in their financial performance. There is a positive relationship between the corporate social responsibility and the financial performance of the banks both in short and long run [15].

Thus, there are two main aspects from which one can measure the overall performance of the banks, financial and human aspects. The dimensions of performance of a bank under human aspect are: customer satisfaction, employee satisfaction and Corporate Social Responsibility (CSR). The following conceptual model explains the performance and its dimensions.
CONCEPTUAL MODEL

Fig. 1: Conceptual Model

ANALYTIC HIERARCHY PROCESS MODEL

Analytic Hierarchy Process (AHP) is one of the multi-criteria decision making method that was originally developed by Prof. Thomas L. Saaty. It has particular application in group decision-making, and is used around the world in a wide variety of situations, in fields such as government, business, industry, healthcare, and education. It provides a comprehensive and rational framework for structuring a decision problem, for representing and quantifying its elements, for relating those elements to overall goals [16].

AHP application can assist managers to effectively evaluate a firm's overall performance in their long-term strategic planning process even under complex economic and marketing conditions [17]. AHP is a structured method to elicit preference opinion from decision-makers. Its methodological procedure can easily be incorporated into multiple objective programming formulations with interactive solution process [18]. The AHP approach involves decomposing a complex and unstructured problem into a set of components organized in a multilevel hierarchic form [19]. A salient feature of the AHP is to quantify decision-makers’ subjective judgments by assigning corresponding numerical values based on the relative importance of factors under consideration [20].
A huge literature is available on the applications of AHP model in different decision-making problems. The Analytic Hierarchy Process has been applied by the researchers for evaluation of quantitative and qualitative factors which influence the route selection decision.

AHP is used by the researchers in the banking industries for measuring the performance of the banks by considering both the financial and non-financial criterions. Quantitative criteria are financial ratios, which are related to the performance of bank’s businesses. Qualitative criteria are characteristics used in the existing system for evaluation and supervision of banks [21]. The performance of Croatian banks has also been measured using AHP model and it enables the integration of the quantitative data (measured by selected financial ratios) and qualitative data by which the bank features and some internal and external environment factors are described [22]. AHP model is also used by the researchers for determining customer choice in retail banking using bank attributes and demographic factors. Researchers have also used AHP model for measuring the importance of each determinants of profitability in the commercial banks of Malaysia [23]. Analytic Hierarchy Process (AHP) methodology is used to guide decision-makers in banking industries to deal with information security policy [24]. Analytic Hierarchy Process (AHP) is used as an evaluative tool for strategic reconsolidation of capital base by Nigerian commercial banks [25]. AHP model is also used by the researchers for comparison of financial ratios of the banks [26].

AHP is one of the multi-criteria decision-making methods. It provides a comprehensive and rational framework for structuring a decision problem, for representing and quantifying its elements, for relating those elements to overall goals. Users of the AHP first decompose their decision problem into a hierarchy of more easily comprehended sub-problems, each of which can be analyzed independently. The elements of the hierarchy can relate to any aspect of the decision problem—tangible or intangible, carefully measured or roughly estimated, well-or poorly-understood—anything that applies to the decision at hand. Once the hierarchy is built, the decision-makers systematically evaluate its various elements by comparing them to one another, two at a time, with respect to their impact on an element above them in the hierarchy. In making the comparisons, the decision-makers can use concrete data about the elements, but they typically use their judgments about the elements’ relative meaning and importance. It is the essence of the AHP that human judgments, and not just the underlying information, can be used in performing the evaluations. The AHP converts these evaluations to numerical values that can be processed and compared over the entire range.
of the problem. A numerical weight or priority is derived for each element of the hierarchy, allowing diverse and often incommensurable elements to be compared to one another in a rational and consistent way. This capability distinguishes the AHP from other decision-making techniques. In short, it is a method to derive ratio scales from paired comparisons. The input can be obtained from actual measurement such as price, weight etc., or from subjective opinion such as satisfaction feelings and preference. AHP allows some small inconsistency in judgment because one can not be always consistent. The ratio scales are derived from the principal Eigen vectors and the consistency index is derived from the principal Eigen value. The AHP could be understood by the following example. Suppose we have two criterions A and B. The relative scale to measure how much criterion A (on the left) is important than criterion B (on the right) is as follows:

Extremely/ Very Strongly, Equally Strongly, Very Extremely, Absolutely Strongly, Important, Slightly Important, Strongly, Absolutely Important

<table>
<thead>
<tr>
<th>Criterion</th>
<th>A</th>
<th>9</th>
<th>7</th>
<th>5</th>
<th>3</th>
<th>1</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>9</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>B</td>
</tr>
</tbody>
</table>

The respondents will be asked to tick one of the options on this scale. If the respondent feels that his answer is between the two options, then he may tick in between the options. The values in between such as 2, 4, 6, 8 are intermediate values that can be used to represent shades of judgement between those five basic assessments.

**OBJECTIVE**

The main objective of the study is to determine the relative importance of all the dimensions of the performance of the banks using AHP model.

**RESEARCH METHODOLOGY**

The study is based on the primary data collected from the experts of the banking and finance field. A questionnaire (appendix-I) has been prepared for the collection of data that has been used in the AHP model, for assignment of weights to the different dimensions of the performance of the banks. Questionnaire has been provided to banking experts to make a peer comparison of various aspects/ dimensions, which can be used for measuring the performance of the banks. Relative importance of the different aspects/ dimensions of the performance have been evaluated through AHP model. Firstly, the two criteria: Financial Aspect and Human Aspect were
given for peer comparison by the experts. After this, the sub-criteria under human aspect i.e., Corporate Social Responsibility (CSR), Customer Satisfaction (CS) and Employee Satisfaction (ES) were taken in the study for peer comparisons by the experts. Thus, there are two clusters, one at criteria level (Financial v/s Human Aspect) and one at sub-criteria level (CSR vs CS, CS vs ES and ES vs CSR) has been used in the study.

The validity of an AHP study hinges heavily on the composition of respondents. To be valid, respondent are supposed to be fully knowledgeable with regard to the variables and how they relate to the objective. Their knowledge provides the possibility to explore the relative contribution of various dimensions to performance of banks. The collection of primary data on the importance of financial and human aspects in performance of banks has been done from 30 senior level bank employees who are of Grade 5 and above and experts in the area of banking. Convenient sampling has been used for collection of data. The list of experts from the area of banking and finance has been prepared using professional database, newspapers, magazines, and with the help of internet browser. The experts have been contacted personally, in order to explain the purpose of meeting and to get the appointments for the scheduled time for getting their responses and providing their expert advice on the research area. Thirty experts from various banks have been taken for the primary study on the basis of the experts shown their consent and gave scheduled time for responding.

DATA ANALYSIS AND INTERPRETATION

Data analysis using AHP model has been given in the following section. The responses of the each experts have been given in Table 1 along with the consistency ratio and geometric mean of all the responses.

Interpretation

The experts have given their responses on a scale of 1 to 9 for both the criterions. The responses in whole numbers shows that experts have preferred criteria A over criteria B and the responses in fractions shows that criteria B has been preferred over criteria A. The responses are filled by experts on the basis of their experience and subjective judgements, thus we need to check the consistency in the responses of each experts for different criterions. AHP allows some small inconsistency in judgement because human judgement might not be consistent all the time. Thus, we have calculated consistency ratio for each of the experts. If the value of Consistency Ratio is smaller or equal to 10%, the inconsistency is acceptable. If the Consistency Ratio is greater than 10%, we need to revise
the subjective judgment. In the above table, all the consistency ratios for 30 experts are below 10%. Thus, it can be concluded that the subjective judgements of the experts are consistent and hence acceptable for further process.

**Table 1: Responses of Questionnaire**

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Financial vs Human Aspect</th>
<th>Corporate Social Responsibility vs Customer Satisfaction</th>
<th>Corporate Social Responsibility vs Employee Satisfaction</th>
<th>Customer Satisfaction vs Employees Satisfaction</th>
<th>Consistency Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0.42</td>
</tr>
<tr>
<td>R2</td>
<td>0.50</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3.30</td>
</tr>
<tr>
<td>R3</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>4.56</td>
</tr>
<tr>
<td>R4</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>0.32</td>
</tr>
<tr>
<td>R5</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>9.43</td>
</tr>
<tr>
<td>R6</td>
<td>0.33</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0.42</td>
</tr>
<tr>
<td>R7</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2.20</td>
</tr>
<tr>
<td>R8</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>0.64</td>
</tr>
<tr>
<td>R9</td>
<td>0.50</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0.42</td>
</tr>
<tr>
<td>R10</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>6.79</td>
</tr>
<tr>
<td>R11</td>
<td>0.33</td>
<td>4</td>
<td>7</td>
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<tr>
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<td>0</td>
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<td>2.64701</td>
<td>5.007231</td>
<td>1.965567</td>
<td></td>
</tr>
</tbody>
</table>
Financial Aspect vs. Human Aspect

The comparison matrix for financial aspect and human aspect is derived from the geometric mean of the responses given by all the experts is shown in equation 1.

\[
\begin{bmatrix}
\text{Financial vs Financial Aspect} & \text{Financial vs Human Aspect} \\
\text{Human vs Financial Aspect} & \text{Human vs Human Aspect}
\end{bmatrix} = \begin{bmatrix} 1 & 0.907542 \\ 0.907542 & 1 \end{bmatrix}
\]

Equation 1: Comparison Matrix

By using the data of comparison matrix, the normalized principal Eigen vector is calculated, which is also called priority vector. Since it is normalized, the sum of all elements in priority vector is 1. The priority vector shows relative weights among the things that we compare. Priority vector has been calculated for deriving the relative weights of financial aspect and human aspect. Priority vector is shown in equation 2, the weight of financial aspect is found to be 0.475765 and for human aspect it is found to be 0.524235.

\[
\begin{bmatrix} 1 & 0.907542 \\ 0.907542 & 1 \end{bmatrix} = \begin{bmatrix} 0.475765 \\ 0.524235 \end{bmatrix}
\]

Equation 2: Priority Vector Matrix of Main Criteria

Interpretation

Thus, it can be interpreted from the results of the priority vector matrix shown in equation 2 that financial aspect is having a weight of approximately 48% while human aspect is having a weight of approx 52% in the overall performance of the banks. Thus human aspect is more important while measuring the overall performance of the banks but financial aspect is also important to be considered while measuring the overall performance of the banks because 48% is a significant contribution as shown by the experts on the basis of their judgements over two criterions.

Corporate Social Responsibility (CSR) vs. Customer Satisfaction (CS) vs. Employee Satisfaction (ES)

The comparison matrix for corporate social responsibility, customer satisfaction and employee satisfaction is derived from the geometric mean of the responses given by all the experts which are shown in equation 3.
Equation 3: Comparison matrix of CSR, CS and ES

By using the data of comparison matrix, the normalized principal Eigen vector is calculated, which is also called priority vector. Since it is normalized, the sum of all elements in priority vector is 1. The priority vector shows relative weights among the things that we compare. Priority vector has been calculated for deriving the relative weights of dimensions of human aspect as, corporate social responsibility, customer satisfaction and employee satisfaction. Priority vector is shown in equation 4, the weights of CSR, CS and ES are found to be 0.632968, 0.242216, and 0.124816 respectively.

Equation 4: Priority Vector Matrix of Sub-Criteria under Human Aspect

Interpretation:
Thus it can be interpreted from the results of the priority vector matrix shown in equation 4 that corporate social responsibility is having highest weightage among the three dimensions of the human aspect. Corporate social responsibility which is having a weight of approx 63% is found to be important than customer satisfaction and employee satisfaction while customer satisfaction having a weight of 24% is more important than employee satisfaction with a weight of approx 12%.

CONCLUSION
Thus, overall it can be interpreted from the results of AHP model that human aspect is more important than financial aspect in banking. While using the AHP model for sub-criteria under human aspect, it is found that corporate social responsibility is more important than customer satisfaction and employee satisfaction. Among two variables, customer satisfaction and employee satisfaction, customer satisfaction is more important than employee satisfaction in banks. The weights calculated for these criterion and sub-criterion have been used in the following section to measure the overall performance of the banks.
REFERENCES


APPENDIX I

Questionnaire for Evaluation of Degree of Contribution of Various Dimensions of Performance in the Overall Performance of the Banks

I request your participation in “A Study on Performance of Commercial Banks”. The study is part of my doctoral dissertation work. It is especially interested in understanding the relative importance of financial and human aspect of a bank with respect to profitability. Measuring the performance of the banks from each possible dimension is of greater importance for the nation. This study is hoped to provide understanding with regard to the degree of contribution of various dimensions of performance measurements for banks. Such an understanding will provide a guide to improve the specific areas for improvement of overall performance in the banking industry.

The results will be made publicly available and the anonymity of individual banks and individual respondents will be strictly maintained. I hereby undertake that the information collected through this questionnaire will be used for research purpose only.

(Eliza Sharma)
Assistant Professor

Name of the Bank...........................................................................................................

Which dimensions of performance in the list below have greater contribution to the overall performance of this bank? Compare each of the following pair of dimensions, and please encircle the response that most closely describes your response on the basis of following scales.

Extremely/ Very Strongly Equally Strongly Very Absolutely
Important Important Slightly Important Slightly Important Strongly Absolutely
Important Important Important Important Important Absolutely

Criterion          Criterion
A   9   7  5   3  1 3 5  7 9 B
<table>
<thead>
<tr>
<th>Absolute</th>
<th>Absolute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Aspect</td>
<td>Human Aspect</td>
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<td>7</td>
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<table>
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<th>Corporate Social Responsibility (CSR)</th>
<th>Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>7</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Corporate Social Responsibility (CSR)</th>
<th>Employee Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Satisfaction</th>
<th>Employee Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

Name (Optional).................................................................
Designation.................................................................
Experience (in years)......................................................

*Thank you for assisting us in our evaluation!*
Comparative Study on Advertising and Sales Promotional Strategies in Pharmaceutical Industry—A Contemporary Thought

Prashant Kalshetti¹, Sudarshan S. Savanoor² and Neha Sharma

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E-mail: ¹prashantkalshetti@gmail.com, ²sudarshan.savanoor@gmail.com

Abstract—In the eon of intense competition and impulsive markets and remarkable potentiality of Pharmaceutical Sector in Indian scenario the empirical study of advertising and sales promotional strategies is one of avenues, wherein each key organizational group tries to get into, grow due to which the present companies are trying to survive and at the same time willing to enhance their profitability. Hence, the above entitled research is carried out in Pune wherein this article tries to focus on two specific distinguished product promotional strategies: Advertising and Sales Promotion being adopted in Pharmaceutical Industry to enhance the performance of sales of its products and to have an edge over other industries in the days to come. This article strives to highlight on Pharma companies’ advertising and sales promotion strategies considering the notions of Four Pillars as Medical Representatives, Medical Practitioners (GPs–General Physicians, CPs–Consultant Physicians), Field Managers and Chemists.

On having gone through this article one would come to know about the contemporary view on Pharma sector performance based on comparative analysis between advertising and sales promotion and would be able to understand which strategy would be suitable enough to have better grip in market considering the competition.

Keywords: General Physicians, Consultant Physicians, Key Opinion Leaders, Push Strategy, Pull Strategy, Advertising, Sales Promotion, Intrinsic Motivational Factors, Leave Behind Literature.

INTRODUCTION

The pharmaceutical industry has been playing a vital role through developing, producing, and marketing drugs or pharmaceuticals licensed for use as medications. Pharmaceutical companies are entitled to deal in generic and/or brand medications and medical devices. They are subject to a variety of laws and regulations regarding the patenting, testing and ensuring safety and efficacy and marketing of drugs. The pharmaceutical industry in India is the world’s largest in terms of volume and stands 14th in terms of value. Ministry of Chemicals and Fertilizers reveals that the total turnover of India’s pharmaceutical industry between 2008 and September 2009 was US$ 21.04 billion while the domestic market was worth US$12.26 billion. Sale of all types of medicines in the country has reached a revenue of around US$ 19.22 billion till 2012.
The number of Indian pharma companies is comparatively low. Indian pharma industry is mainly operated as well as controlled by dominant foreign companies having subsidiaries in India due to availability of cheap labour in India at lowest cost. In Indian scenario, about 295 companies are in organized sector which contribute near about 90% of Indian Pharma market and over 20,000 registered drug manufacturers contribute to rest 10% of the Indian market. The total size of the Indian Pharma market is about Rs. 50,000 crores wherein more than 35,000 crores is in domestic sales and rest 15,000 crores is in export. Most companies, even the multinationals, operating in India, employ Indians almost exclusively from the lowest rank to high level management. Homegrown pharmaceuticals, like many other businesses in India, are often a mix of public and private enterprise. Although many of these companies are publicly owned, leadership passes from father to son and the founding family holds a majority share.

**LITERATURE REVIEW**

The pharmaceutical industry is the world’s largest industry with a worldwide revenue of approximately US$ 2.8 trillion. Pharma industry has seen major changes in the recent years that place new demands on payers, providers and manufacturers. Customers now demand the same choice and convenience from Pharma industry that they find in other segments.

Indian pharmaceutical industry is poised for high consistent growth over the next few years, driven by a multitude of factors. Top Indian companies like Ranbaxy, DRL CIPLA and Dabur have already established their presence. The pharmaceutical industry is a knowledge-driven industry and is heavily dependent on R&D for new products and growth. However, basic research (discovering new molecules) is a time consuming and expensive process and is thus, dominated by large global multinationals. Indian companies have entered the area only recently. The Indian pharmaceutical industry came into existence in 1901, when Bengal Chemical & Pharmaceutical Company started its maiden operations in Calcutta. The next few decades saw the pharmaceutical industry moving through several phases, largely in accordance with government policies. Commencing with repackaging and preparation of formulations from imported bulk drugs, the Indian industry has moved on to become a net foreign exchange earner, and has been able to underline its presence in the global pharmaceutical arena as one of the top 35 drug producers worldwide. Currently, there are more than 2,400 registered pharmaceutical producers in India. There are 24,000 licensed pharmaceutical companies. Of the 465 bulk drugs used in India,
approximately 425 are manufactured within the country. India has more 
drug-manufacturing facilities that have been approved by the U.S. Food and 
Drug Administration than any country other than the US. Indian generics 
companies supply 84% of the AIDS drugs that Doctors without Borders uses 
to treat 60,000 patients in more than 30 countries. [1]

**Pharma Marketing Process Perspective**

While many pharmaceutical companies have successfully deployed a 
plethora of strategies to target the various customer types, recent business 
and customer trends are creating new challenges and opportunities for 
increasing profitability. In the pharmaceutical and healthcare industries, a 
complex web of decision-makers determines the nature of the transaction 
(prescription) for which direct customer of pharma industry (doctor) is 
responsible. Essentially, the end-user (patient) consumes a product and 
pays the cost. [2]

Use of medical representatives for marketing products to physicians and 
to exert some influence over others in the hierarchy of decision makers has 
been a time-tested tradition. Typically, sales force expense comprises an 
estimated 15% to 20% of annual product revenues, the largest line item on 
the balance sheet. Despite this other expense, the industry is still plagued 
with some very serious strategic and operational level issues.

From organizational perspective, the most prominent performance related 
issues are enlisted below:

1. Increased competition and shortened window of opportunity.
2. Low level of customer knowledge (Doctors, Retailers, Wholesalers).
3. Poor customer acquisition, development and retention strategies.
4. Varying customer perception.
5. The number and the quality of medical representatives
6. Very high territory development costs.
7. High training and re-training costs of sales personnel.
8. Very high attrition rate of the sales personnel.
9. Busy doctors giving less time for sales calls.
10. Poor territory knowledge in terms of business value at medical 
    representative level.
11. Unclear value of prescription from each doctor in the list of each sales person.

12. Unknown value of revenue from each retailer in the territory.

13. Virtually no mechanism of sales forecasting from field sales level, leading to huge deviations.

14. Absence of analysis on the amount of time invested on profitable and not-so-profitable customers and lack of time-share planning towards developing customer base for future markets.

15. Manual and cumbersome administrative systems and processes designed which don’t facilitate optimal efficiency levels in sales teams.

**BUSINESS PROMOTIONAL STRATEGY**

What’s the secret behind these successes? For one, the company operates in niche formulations (chronic) segments such as psychiatry, cardiovascular, gastroenterology and neurology. While most of the top Indian companies have focused on antibiotics and anti-infectives (acute), Sun Pharma focused on therapeutic areas such as depression, hypertension and cancer. The company has introduced the entire range of products and has gained leadership in each of these areas. Being a specialty company insulates Sun Pharma from the industry trend. The first quarter results for FY02 explain this to some extent. While the industry was affected to a large extent by a slowdown in the domestic formulations market, Sun Pharma logged a growth of 26% in revenues. Over the years, Sun has also used the strategy of acquisitions and mergers to grow quickly. It acquired Knoll Pharma’s bulk drug facility, Gujarat Lyka Organics, 51.5% in M.J. Pharma, merged TamilNadu Dadha Pharma & Milmet Labs and acquired Natco’s brands. Post-merger with TamilNadu Dadha Pharma, the company gained presence in gynecology and oncology segments. One of the constants of pharmaceutical company strategy over the past decade has been increasing scale. Only by growing larger companies are able to afford considerable costs of drug development and distribution.

**Advertisement and Sales Promotion Pharmaceutical Industry**

The advertisement of pharmaceutical products should be truthful. There should not be any wrong statement regarding its contents and their percentage. It should provide full details regarding the action and uses, proprietary name as well as the genetic name, dosage form, mode of administration, side effects, treatment of toxic effects, precautions and
contraindications. The above statement should be truthful, scientifically correct and proved. World Health Organization has passed this resolution regarding advertising of the pharmaceutical products. The purpose of advertising in the ethical pharmaceutical market is the same as that for any other products and thus there are a lot of restrictions on it.

A customer (patient) cannot use a medicine without proper prescription of a physician. The majority of pharmaceutical products and their direct advertisement are prohibited according to the Drug and Magic Remedies (Objectionable Advertisements) Act. However, general/ home remedies, products, such as, pain balm, inhalers, Iodex, antiseptic creams and other products, which do not require any prescription and their purchases can be advertised by any of the direct methods of advertisement. [3]

Sales Promotion

The main aim of any business is to earn maximum profit and this is possible only through maximum sales. The maximum sales can be achieved by using various techniques of sales promotion. Sales promotion includes those marketing activities, other than personal selling, advertising and publicity that stimulate consumers purchasing and dealers’ effectiveness such as window display, shows and expositions, demonstrations etc. Sales promotion is concerned with the creation, application and dissemination of materials and techniques that supplement advertising and personal selling. Sales promotion makes use of direct mail, catalogues, trade shows, sales contents, premiums, samples, window display and other aids. Its purpose is to sell certain brands and to make consumers more eager to buy that brand. Personal selling and advertising do include prospects to make their decisions. ‘Sales promotion provides an extra stimulus’. [4]

OBJECTIVE OF THE STUDY

The objectives of the study primarily concentrate on:

1. To study the comparison between advertising and sales promotion strategies of pharmaceutical products.
2. To know the response of medical practitioners and medical representatives on strategies adopted by pharmaceutical companies.
3. To find out the desired way of promotion for chemists and medical representatives of pharmaceutical drugs.
RESEARCH METHODOLOGY

This article is prepared on the basis of surveys and data collection through primary and secondary sources.

As this research is based on descriptive type of research of purposive sample type since the research is carried out with prior knowledge of the population. Then, the selection is being done on the basis of the proportion of the population. Sample size of research was of 64 respondents as categorized into four groups:


b. Chemists-12.

c. Medical Representatives-20.

d. Field Managers-12.

DATA ANALYSIS

The survey was carried through self administered questionnaire having the combination of Open-End, Close-End, Dichotomous, Multiple Choice, Ranking, Rating and Likert Scale Method. The questionnaires were administered to Doctors, Chemists, Medical Representatives and Field Managers. Based on this, the data is analyzed.

DATA ANALYSIS FROM MEDICAL PRACTITIONER’S PERSPECTIVE

Fig. 1: Factors Promoting Pharmaceutical Brands from the Perspective of Doctors
**Explanation**

As per the survey, 55% of doctors recommend generic medicines with a view of anti-side effect and economy of medicine for patients. Doctors moderately believe that medical representatives are the source of guarantee for promotion of drugs and they are well qualified in detailing the brand. Apart from above two doctors strongly believe that the promotion of pharma brands depends on:

1. Drug Combination.
2. Brand Name.
3. Their Own Experience in Profession. Even in addition to the above doctors’ stress upon the companies IMC (Integrated Marketing Communication) with importance of drug and motivation through MR's marketing skills.

Responses Obtained from Doctors about Integrated Marketing Communication applied by Medical Representatives to Promote their drugs.

**Table 1**

| Explanation about the importance of the drugs | 8 |
| Promoting the name of the pharmaceutical industry | 5 |
| Presentations & gifts for promotion | 1 |
| Giving weight age to the brand of their company | 1 |
| Analyzing your patients & recommending the drugs | 3 |
| Motivating you to promote their drugs through their marketing skills | 4 |

**Data Analysis from Medical Representative’s Perspective**

![Graph showing data analysis from medical representative’s perspective]

*Fig. 2: Factors Promoting Pharmaceutical Brands from the Perspective of Medical Representatives*
**Explanation**

As per survey 60% of MRs say that major contributor of promotion of brands depends on drug related to his practice and presentation along with communication, detailing and drug knowledge. Out of survey, it is found that the doctors do take risk in prescribing new medicines (brands). Even while promoting the brands the contribution from the company side is of more with field work and laboratory visits. In survey, it is found that companies are offering benefits like salary increment based on performances, others monetary benefits to MRs which leads to intrinsic motivational factor to the MRs to promote pharma brands more aggressively.

**Data Analysis from Field Managers Perspective**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gifts</td>
<td>5</td>
</tr>
<tr>
<td>MR Training</td>
<td>2</td>
</tr>
<tr>
<td>Schemes</td>
<td>3</td>
</tr>
<tr>
<td>Seminar and so on</td>
<td>2</td>
</tr>
<tr>
<td>Packages</td>
<td>0</td>
</tr>
</tbody>
</table>

Fig. 3: Responses Obtained from the Managers for the Promotion of Pharmaceutical Brands

**Explanation**

As MR is one the key components in promotional strategies of pharma marketing, he contributes a lot in promotion of pharma brands. Based on this philosophy, managers expect that MR should be well qualified and should have speaking skills and marketing techniques as well. Accordingly managers suggest that MR should be well trained in training session as far as drug and product knowledge is concerned. From survey, it is found that the fair way of promoting brand to a doctor is:
1. Gifts and Schemes
2. Conferences, Seminars,
3. Promoting doctors to study,
4. Improving Distribution Channel
5. MRs Rapport with doctors out of his personal relations even. (As per manager’s opinion).

**Data Analysis from Chemists Perspective**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing</td>
<td>2</td>
</tr>
<tr>
<td>Price</td>
<td>4</td>
</tr>
<tr>
<td>Brand name</td>
<td>6</td>
</tr>
</tbody>
</table>

![Fig. 4: Responses Obtained from the Chemists for Promotional Strategies from the Point view of Patient](image)

**Explanation**

As per survey, 80% of the Chemists keep branded drugs in their shelves, brand name is prime factor which fascinates patients to buy the drugs followed by price and packing respectively. Doctors recommend that chemical combination and effectiveness of drug is the prime promotional factor for prescription (as per the opinion of chemists)
The Response Obtained from the Chemists for Promotional Strategies from the Doctors Perspective

![Graph showing response obtained from chemists for promotional strategies from the doctors perspective.]

**Fig. 5: Response Obtained from the Chemists for Promotional Strategies from the Doctors Perspective**

**TABLE 4**

<table>
<thead>
<tr>
<th>Factors</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>5</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Effectiveness of drugs</td>
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<td>7</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Brand names</td>
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<td>0</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Patients condition health</td>
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<td>0</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Explanation**

When survey was done for chemists from the doctor’s perspective, it can be inferred from the above diagram and chart that 100% of the surveyed chemists rank brand at 4th position than chemical combination and effectiveness of the drug, which means doctors are more concerned and keen about drug efficiency and patient’s tolerability.

The above referred Analysis is summed up in Tabular Form as:

**TABLE 5**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Respondents of Survey</th>
<th>Perspectives for Promotional Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Doctors</td>
<td>Drug Combination &amp; IMC</td>
</tr>
<tr>
<td>2</td>
<td>Medicals Representatives</td>
<td>Drug related to Doctors practice and Intrinsic Motivational factors</td>
</tr>
<tr>
<td>3</td>
<td>Field Managers</td>
<td>Offering and MR’s Rapport with Doctor</td>
</tr>
<tr>
<td>4</td>
<td>Chemist</td>
<td>Brand Name, Price and Packing Patients Point of View and Combination and effectiveness of Drug Doctors Perspectives</td>
</tr>
</tbody>
</table>
Data Analysis from the Perspective of Advertising
(Questions Asked to Doctor)

**Table 6**

<table>
<thead>
<tr>
<th>Category</th>
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<th>Sponsorship and Gifts</th>
<th>Kol</th>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GP</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Senior CP</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fig. 6: Views of Consultant Physicians, General Physicians and Senior Physicians from Advertising Perspective**

**Explanation**

As per the survey, 75% of the doctors (majority CPs) were inclined towards the detailing in proper manner, as they feel that detailing makes it easier to understand about molecule, product and its combination and patient’s tolerability. Followed by 10% of the doctors (Majority GPs) who were inclined towards gifts and sponsorships. It has been seen that 15% of the senior doctors (CPs) were inclined towards research and study wherein they believe in working as KOL (Key Opinion Leaders) for the molecules and brands.

**Data Analysis from Perspective of Sales Promotion
(Questions Asked MRs, Chemists)**

**Table 7**

<table>
<thead>
<tr>
<th>Category</th>
<th>Training</th>
<th>Schemes</th>
<th>Discounts</th>
<th>Benefits to the Channel Members</th>
<th>Incentives to the MRs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRs &amp; Chemists</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>
From the survey, it is found that sales promotion facilitates the distribution channel. It is also observed that 40% of the respondents projected their view as benefits to the distribution channel and at the same time 40% of the MRs projected their views as the incentives as vital factor of sales promotion; followed by training with a response of 5%, schemes with a response of 10% and discount as 5%.

**Outcome of the Proposed Study**

As advertising in this study is proposed as the form of mass media communication directed towards influencing the targeted audience, i.e. doctor who mainly prescribes the brands, pushes the same in market to result for demand for brand in market. Wherein sales promotion is referred as the mass communication directed towards informing and influencing the channels of distribution which pulls the demand in market and helps in clearing the stock of brands. Hence, advertising from the perspective of doctors detailing and approach for Key Opinion Leaders is seen as vital. On the other hand, in sales promotion, incentives to MRs and benefits to the channels of distribution has got the edge over other options.

**Suggestions**

Suggestions are based on the inference drawn from the analysis and structured questionnaire to the respondent’s response.

Companies should pay more attention towards combination of drug (reduces pill burden) and anti-side effects of drug (tolerability of a drug to the patient) in good proportion for better prescription support from the doctors.
Adoption of IMC (in reference with presentation, drug knowledge, patients’ convenience and drug combination and other promotional inputs) should be more aggressive so that brand recollection in the minds of doctor becomes easier.

The span of training programme of MR should be increased to three months so that he gets well equipped with product knowledge and marketing techniques. At the same time, companies should consider benefits like salary increment based on performances, other monetary benefits to MRs which lead to intrinsic motivational factor to the MRs to promote pharma brands more aggressively.

All the time, rather opting the options of offering to the doctors, companies should emphasize more on soft skills training to the MR and managers, giving more scientific stuffs to doctors (through LBL i.e. leave behind literature strategies, seminars, CMEs i.e. Continuous Medical Programs, Camps) and fair discount offers to chemists (as per the norms of Drug Pricing Control Authority of India), promotional inputs, seasonal offers and so on, in turn which may fetch fair sales to industry and the interest of patients will also be safeguarded.

Pharma companies should emphasis more on Key Opinion Leaders Approach along with detailing than gifting and sponsoring. At the same time, more prominence to be conferred to sales promotion in areas viz; schemes, offerings, along with incentives to MR and benefits to channels.

Sales technique and negotiation skills training to be utterly offered to MR in turn which will add considerable contribution to the performance of pharmaceutical industry. Hence, at broad spectrum, promotion of both advertising and sales should be done simultaneously but pharmaceutical companies should focus more on sales promotional techniques because it pulls the products in market and helps in enhancing the sales performance more effectively than advertising.

In short, the promotion of strategies should be centred with philosophic outlook:
The promotion of brand ➔ promotion of profitability ➔ promotion of patient’s health ➔ promotion of medical practitioners’ confidence ➔ promotion of sound and prosperous Pharma Industry.
CONCLUSION

Glancing at the today’s scenario most of the pharma companies are adopting the very aggressive promotional strategies to grab the maximum share from the market by keeping the philosophy in mind that “ONE MARKET AND MANY PLAYERS, AND SURVIVAL OF THE FITTEST”. Hence, an attitude of an industry has become that by hook or crook one has to be in market irrespective whether its existing player or new entrants, everyone wants to be in market with enhancing profitability and sustainability and to achieve this today’s Pharma Companies using the aggressive promotional strategies.

As in present case most of the pharma companies are adopting both distinguished promotional strategies as advertising and sales promotion. Wherein respondents are in form of medical practitioners as Consultant Physicians, General Physicians, Senior Doctors who are the key factor of advertising and MRs and Chemists are factors of Sales Promotion.

As both the factors of promotion play pivotal role in performance of pharmaceutical industry through advertising as detailing and other allied aspects which in turn leads to push strategy and sales promotion as Incentives and offerings to the channel of distribution in turn leads to pull strategy. Hence, above cited elucidation is summed up as:

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Fig. 8: Model-Push and Pull Strategy of Promotion of Pharmaceutical Industry
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Managing Skill Gaps through Competency Mapping—A Strategic Tool for Competitive Edge

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Abstract—In the present competitive business environment, human resources are the most valuable resources in an organization for the value creation to attain competitive advantage. The recognition, utilization and development of the human capabilities for the enhancement of individual’s performance and organizational excellence are the most decisive functions of strategic human resource management. Competency mapping is concerned with the identification and development of an individual’s capabilities which are necessary for efficient performance as per the organizational strategy. It is imperative for managing skill gaps for strategic utilization of the human assets in the organization. The present article focuses on examining competency mapping as a strategic tool for competitive advantage that facilitates managing skill gaps in the perspective of key issues and suggestions as well directions for further research in this domain.

Keywords: Human Resources, Competitive Advantage, Competency Mapping, Skill Gaps.

INTRODUCTION

The paradigm shift towards for recognition of human resources owes to the globalization, competition, transformation in employment conditions, workforce diversity, technological innovation and above all, dire need of creating competitive advantage to ensure growth and survival in the dynamic competitive scenario. Moreover, in a knowledge economy, the human capabilities are more vital as compared to the capabilities of non-human resources (Legnick-Hall & Legnick-Hall, 2003). Developing human resources encompasses diverse dimensions focussing on the advancement of the capabilities according to the organizational requirements. The inefficiencies in individual performance significantly owing to the skill gap that exists between the present and required skill of an employee required for a particular job, affects the organizational performance. Managing such skill gaps is very critical and challenging task in the sense that these require due attention both on what you have and what you need as far as competencies and skills are concerned.
Competency mapping is a strategic process through which bridges the skill gaps by focussing on the availability and requirements of the competencies to attain the organizational competitiveness. It focuses on the development of the human competencies that determines the efficiency of individual performance. Against this backdrop, the present paper is based on extensive review of literature on strategic human resource management, case studies relating to competency management and skill gaps and organized. Section 2 presents conceptual framework of competency mapping. Section 3 examines the strategic role of competency mapping for bridging skill gaps for enhancing organizational competitive advantage. Section 4 concludes the paper with suggestions as well as further possible areas of research in this context.

COMPETENCY MAPPING—A STRATEGIC APPROACH

Leveraging employee’s best attributes through their knowledge, skills and abilities helps organization to augment their competitive strength. Human resource development (HRD) has been explained by different researchers from various angles. Rao (1987) elucidates HRD as a process of facilitating employees to gain competencies like skills, values, knowledge, abilities etc. that plays an important role to meet present and future skill challenges by developing and exploiting the capabilities to utilize hidden potential for organizational development. The sustainable developmental value of the human resources can be possible only when they are valuable and have no substitute. The competitive edge of an organization is possible only when human resources create organization value that facilitates to implement strategies to improve efficiency (Barney, 1991). The organizational excellence depends upon the value of human capital which is accumulated through the capabilities of the human resources in an organization.

Jackson & Schuler (1980) recognizes human assets as a significant contributor of sustainable competitive advantage. When competencies of the employees of an organization are superior to its competitors, then the organization attains competitive edge over its rivals.

Competency mapping is based on the fact that the level of skills, knowledge and competencies of human resources significantly affects the organizational competitive edge (Wernerfelt, 1984 and Rumelt, 1984).

Hamel and Prahalad (1990) outline three essential attributes of competencies as these:

- Widen the accessibility of markets.
- Contribute towards the achievement of organizational objectives; and
- Provides competitive edge over the competitors.
The performance of the employees depends upon various skills that need to be escalated through appropriate HR strategies (Becker et al., 2001 & Colan, 2009). Competency mapping creates linkage between organizational strategy and HR development programmes to synergize value creation. Competency mapping provides a strategic platform for various HR functions such as selection, job analysis, appraisal, compensation, career management, training and development etc. for sustainable competitive advantage. In the present business scenario, competencies are vital ingredients for the enhancement of the human capital, which is the major source of competitive edge in a knowledge economy.

**Benefits of Competency Mapping**

- Easy to cope with the changing business requirements.
- HR practices as per the organizational requirements.
- Appreciation of knowledgeable human resources.
- Enhancement of employee retention.

Competency mapping aims at bridging the skill gaps by redesigning the HR strategic framework based on the assessment of available competencies and required competencies to make optimum utilization of human potential more strategically. Competency mapping is exercised through various competency models framed as per the organizational requirements. Competency model outlines the objectives, methodological development plan, identification of competencies, application and review of competency model (Marrelli et al., 2005).

**Elements of Competency Mapping Process**

- Knowledge of organizational objectives.
- Identification of competencies required to attain organizational objectives.
- Determination of available skills of human resources.
- Assessment of skill gaps.
- Formulation of strategies to bridge the skill gap.
- Implementation of strategies.
- Evaluation and review.
BRIDGING SKILL GAPS THROUGH COMPETENCY MAPPING FOR COMPETITIVE ADVANTAGE

The management of skill gaps is of utmost importance and challenging function in the domain of strategic human resource management. A skill gap refers to the difference between present skills and required skills to perform a particular job more effectively and efficiently. The existence of skill gaps owes to rapid changes in the competition conditions prevailing in the business. As per the estimates of the McKinsey Global Institute Report 2012, there will be a global shortage of 40 million highly skilled and 45 million semi-skilled workers in 2020. There is always continuous need to develop and utilize the human skills to stay ahead of the competitors within the framework of organizational goals and strategies.

Factors Responsible for Skill Gaps

- Increased competition pressure for survival and growth.
- Continuous changes in the business environment.
- Non-availability of the skilled workforce with the required capabilities.
- Lack of continuous skill upgradation of the employees.

Boyatzies (1982) explains skills as specific personal qualities that are related to effective and efficient performance of the human resources. There are various skills required to ensure efficient and effective performance such as strategic skills, functional skills, operational skills, behavioural skills, self-management skills, leadership skills, innovative thinking etc. Competency mapping focuses on improving skills in such a way that contributes towards the development of both, an individual and organization. It involves enhancement of knowledge, abilities and motivating the employees for the strategic use, aiming at sustainable organizational competitiveness.

The strategic management of HR skills through competency mapping bridges the gap between the present state of organization to the required state of organization in a changing environment. It is possible by continuous skill upgradation of the employees so that there may be innovation-led growth which is a key factor for sustain competitiveness in a long run. However, there are also certain key issues of concern that require due diligence. The most important issue of concern in competency mapping is to reconcile the competencies of the human resources with the organizational strategies in the framework of organization vision. Another issue is to cope
with the dynamic business environment. Competency mapping without considering the contemporary changes can lead to a competitive hurdle. It requires continuous review and modification according to the current conditions. The healthy participation of the employees is also necessary to make maximum out of competency process.

The Institute of Chartered Accountants of India (ICAI): A Case Study

The Institute of Chartered Accountants of India (ICAI) is a regulatory body, established in 1949, for the profession of chartered accountancy. ICAI has achieved recognition as a premier accounting body not only in the country but also globally. ICAI now is the second largest accounting body in the whole world. The profession of chartered accountancy is a challenging profession and a Chartered Accountant (CA) requires multi-dimensional expertise in terms of knowledge and skills. With the changing scenario, both at national and international level owing to globalization, technological development and increased MNCs, the ICAI is continuously involved in upgrading the professional skills of accounting professionals by competency mapping.

Competency mapping, as discussed earlier, focuses on the identification and development of skills as per the requirements to enhance excellence through gap analysis. Earlier, the main role of a chartered accountant was concerned with accounting and auditing. But, with the wave of globalization, the role of a CA has become wider. Keeping a vigilant approach, the ICAI, examines the competencies required by a chartered accountant to equip them with the skills to perform their functions by preparing them with a fine blend of academic and practical training programmes for professional excellence in the gamut of mission and vision of the institution.

A CA plays a vital role in any organization, particularly, with the growth of service sector in India. A CA has to perform within the rules and regulations as prescribed by ICAI. In order to survive and succeed in the service industry, specific skills and knowledge is required. The ICAI is continuously engaged in identifying and developing skills among its members and students to enhance professional excellence. The current global scenario demand not only financial expertise but also managerial expertise. To fill this skill gap, the ICAI has introduced management courses for the development of various managerial skills. The focus of such programmes is to develop skills besides financial expertise such as:

- Communication Skills.
- Professional Skills.
Managing Skill Gaps through Competency Mapping—A Strategic Tool

- Marketing Skills.
- Leadership Skills.
- Ethical Values.
- Managerial Skills etc.

In this way, the ICAI is able to develop a responsible CA with competitive skills, capable to enhance the dignity of the institution and protection of the interests of general public.

CONCLUSION

In order to reap the benefits of competencies, the HR development programmes should be duly focussed on the organizational goals. A strategic human resource management approach duly integrated with the vision and mission of an enterprise is a prerequisite for bridging the skill gaps by means of competency mapping (Senge, 1990 and Katzenbach & Smith, 1993). It also enhances the motivation and satisfaction levels of the employees as skills are developed based upon their capabilities. To conclude, an organization can attain competitive edge with the strategic use of human skills with a fine blend of competencies and needs of the organization. Further research can be explored in the area of strategic fit, flexibility management and environmental assessment to make optimum use of HR competencies for sustainable competitiveness.

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Employee Motivation in Airports Authority of India

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Abstract—Employee motivation is the vital element in making employees get attached towards an organization. The main aim of this study is to identify the factors that influence motivational behaviour among employees in a public sector organization. The research design used in this study is descriptive in nature and thus 310 employees were selected for the study. The sampling procedure used in this study is unrestricted or simple random sampling. A well-structured questionnaire comprising of close-ended questions were used. Analysis and interpretation were drawn from the collected data. Based on the findings of the study, the researcher has drawn a few suggestions for consideration of the management and concludes the research with a positive note.

Keywords:
- Motivation
- Organizational Goals
- Training
- Organizational Environment
- Employee Behavior

INTRODUCTION

Motivation is the driving force which causes us to achieve goals. Motivation derives its success by making human beings reduce their physical pain and thereby increasing their pleasure. It includes attaining specific needs like eating and resting. It is connected to, but different from, emotion. Motivation is one among the three factors, which increases the job performance. Job performance can be obtained by integrating motivation, ability and environment (Moorhead & Griffin, 1998). If any one of these factors is missed, it will lower the level of job performance.

Job Performance = Motivation + Ability + Environment

CONCEPTUAL REVIEW

The process of motivation includes the following stages:

1. **Need Identification:** This is the first phase of motivation. It is the phase when an individual identifies the unfulfilled needs. The needs, thus identified, must be prioritized for attainment.
2. **Searching Ways to Satisfy Needs:** The next step is to find suitable alternatives to satisfy the needs that were identified in the first stage.

3. **Selection of Goals:** The identification of need and the alternatives can be put into action only if an individual has a definite goal attached to it. So, selecting an appropriate goal is the next step.

4. **Performance:** The course of action put in by individual to attain the goal to satisfy the need is the performance

5. **Consequences of Performance Rewards/ Punishments:** If the outcome of performance of an individual is rewarded, the same action is repeated in the future. If not, the action is not repeated.

6. **Reassessment of Need Deficiency:** When the performance is rewarded, an individual is induced to assess for any deficiencies in the need and take corrective actions to eradicate the same.

**Intrinsic and Extrinsic Motivation**

Intrinsic motivation refers to motivation that is driven by an interest, or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure. Intrinsic motivation has been studied by social and educational psychologists since the early 1970s. Research has found that it is usually associated with high educational achievement and enjoyment by students. Explanations of intrinsic motivation have been given in the context of Fritz Heider’s attribution theory, Bandura’s work on self-efficacy and Deci and Ryan’s Cognitive Evaluation Theory (see self-determination theory). Students are likely to be intrinsically motivated if they attribute their educational results to internal factors that they can control (e.g. the amount of effort they put in), believe they can be effective agents in reaching desired goals (i.e., the results are not determined by luck), are interested in mastering a topic, rather than just rote-learning to achieve good grades.

Extrinsic motivation comes from outside of the individual. Common extrinsic motivations are rewards like money and grades, coercion and threat of punishment. Competition is, in general extrinsic, because it encourages the performer to win and beat others, not to enjoy the intrinsic rewards of the activity. A crowd cheering on the individual and trophies are also extrinsic incentives. Social psychological research has indicated that extrinsic rewards can lead to over-justification and a subsequent reduction in intrinsic motivation. In one study demonstrating this effect, children who expected to be (and were) rewarded with a ribbon and a gold star for drawing
pictures spent less time playing with the drawing materials in subsequent observations than children who were assigned to an unexpected reward condition and to children who received no extrinsic reward. Self-determination theory proposes that extrinsic motivation can be internalized by the individual if the task fits with their values and beliefs and therefore, helps to fulfill their basic psychological needs.

**RESEARCH REVIEW**


This paper defines motivation as one of the key factors of productivity and business success of enterprises. The competitiveness of companies in the market is one of the preconditions of their long-term success and even survival. To achieve the necessary level of competitiveness, the company must fulfill a multitude of prerequisites, of which one of the main reasons is productivity. It is reflected in the request to get the maximum from the available human resources of the companies, which is physically manifested in high volume of production, revenues and profits. Labour productivity depends directly on the degree of motivation of employees. The intensity of motivation determines the amount of effort that someone would invest in a unit of time to meet his/ her needs. The greater the intensity of motivation, the more efforts the employees in a company will invest in achieving their tasks and its performance will be better. How to motivate workers to invest maximum of their abilities is the question that arises as a central problem of modern business. The theory of motivation describes what companies can do to encourage people to invest their effort and abilities in a manner that will ensure achievement of the company goals and satisfy their needs. Motivation improves productivity, efficiency and creativity of work, improvement of the quality of working life in enterprises and strengthening the competitiveness and efficiency of enterprises.


This study presents conceptualization of the importance of performance evaluation for public universities which are the major producers of knowledge and scientific research. The study stressed that the most risky decision HEI’s administrators would make is that related to human
resources, which heavily depend on the outcome of performance evaluation generated by the Division of Performance Assessment at Human Resources in the institution for decision-makers that help them make decisions related to employee promotion, transfer, remuneration, rewarding and incentives.

This study is focused on most effective performance evaluation methods that achieve employee satisfaction, motivation, increase productivity, and enhance employee retention. The questionnaire was designed after Likert Five-Point Scale and administered to 100 administrators recruited from registration and service departments at the Aal Al Bayt University, and branch campuses of Al Balqa’’a Applied University within the northern part of Jordan; namely, Al Husn University College, and Irbid Girls College. Results concluded by this study included the following: 1. Mean estimates of participants on the performance evaluation were moderately average. This result would indicate very considerable semi-agreement among participants that performance evaluation is considered as a major assessment method most often used by universities. 2. Mean estimates of participants on the motivation scale items were high, indicating acceptably semi-agreement among participants of awareness to the importance of performance evaluation in propelling motivation to work. 3. Results from the statistical descriptive analysis demonstrated that the high means estimates of participants on the productivity scale indicate very great semi-agreement among participants regarding importance of performance evaluation in the increased productivity of employees.


One would expect a valid, reliable performance evaluation system to give employees and managers data about employees’ strengths and needs for development. If these data are used to reinforce employees’ strengths and to plan and provide developmental assignments in areas of need, then one might also expect improvements in morale, motivation, and productivity. This paper explores employees’ and administrators’ perceptions of a system with these goals, a system specifically designed to appraise performance of North Carolina “Subject to the Personnel Act” (SPA) employees at East Carolina University. The data show that a large proportion of employees, but no supervisors, are dissatisfied with the system; that neither the number of subordinates nor the time spent evaluating employees under the system affects supervisors’ satisfaction with the system; and that employees’ perceptions of the fairness of the system is related to trust and satisfaction with their supervisors but not with compliance with the programme’s
procedures. Although various factors motivate employees and supervisors, pay is very important. So the legislature’s failure to appropriate funds to reward employees who excel undermines the system’s effectiveness. There is a need for further research to explore the relationships between employees’ ratings and their race and sex.


The present article gives a list of axioms needed for building up a mathematical theory of human motivation. A mathematical model of labour motivation is proposed. Motivation is represented as a resulting vector of partial motivation generated by specific groups of needs. Vroom’s model is included in the proposed model as instant motivation. Theoretical correlations between the quantity of funds dedicated to motivate employees and the intensity of motivation factors and between the level of motivation and the level of productivity are proposed.


The article offers tips on how the green industry can motivate its employees to improve productivity. Focussing management strategy on employee motivation can increase productivity. Employee involvement is a motivator. Workers give their best performance when the culture of a company improves an environment of innovation, creativity, participation and ownership. A lively company culture can bring a sense of belonging, reinforce team spirit, promote organization and leadership skills.


The article discusses the results of a research paper published in a 2008 issue of the journal Industrial Relations by Philip Moss, Harold Salzman and Chris Tilly, titled “Under construction: The continuing evolution of job structures in call centres” The study investigated employee turnover, hierarchical structures and career opportunities in call centres. The results indicated that call centres typically strive for cost minimization through flat hierarchies, but often discover that functional levels of customer service cannot be delivered without increasing their supervisory apparatus and employee retention efforts.

The article provides a synthesis of employee motivation theories and offers an explanation of how employee motivation affects employee retention and other behaviours within organizations. In addition to explaining why it is important to retain critical employees, the author described the relevant motivation theories and explained the implications of employee motivation theories on developing and implementing employee retention practices. The final segment of the paper provides an illustration with explanation on how effective employee retention practices can be explained through motivation theories and how these efforts serve as a strategy to increasing organizational performance. In today’s highly competitive labour market, there is extensive evidence that organizations regardless of size, technological advances, market focus and other factors are facing retention challenges. Prior to the September 11 terrorist attacks, a report by the Bureau of National Affairs (1998) showed that turnover rates were soaring to their highest levels over the last decade at 1.3% per month. There are indeed many employee retention practices within organizations, but they are seldom developed from sound theories. Swanson (2001) emphasized that theory is required to be both scholarly in itself and validated in practice, and can be the basis of significant advances. Given the large investments in employee retention efforts within organizations, it is rational to identify, analyze and critique the motivation theories underlying employee retention in organizations. Low unemployment levels can force many organizations to re-examine employee retention strategies as part of their efforts to maintain and increase their competitiveness but rarely develop these strategies from existing theories. The author, therefore, described the importance of retaining critical employees and explained how employee retention practices can be more effective by identifying, analyzing, and critiquing employee motivation theories and showing the relationship between employee motivation and employee retention. Furthermore, Hale (1998) stated that 86% of employers were experiencing difficulty attracting new employees and 58% of organizations claim that they are experiencing difficulty retaining their employees. Even when unemployment is high, organizations are particularly concerned about retaining their best employees.

The article offers various employee motivation, recognition, rewards and retention steps used by certified public accountant (CPA) firm Weaver to deal with a larger workforce. It notes that motivating employee requires the need to evaluate compensation rate, define career paths for advancement, and supply ample feedback. It adds that recognizing employee needs firms to publicize events that matter to them and acknowledge the value of volunteerism.


The article presents information on employee retention and employee motivation during the recession. A recent employee survey shows that money is not the only factor which affects job satisfaction. It is said that companies should also consider other factors such as work-life balance, professional-development programmes, and workplace environment. Incentives like job-sharing, flexible work hours and a sense of challenge may also help in employee retention.


Organizations have begun to develop human resource strategies to support employees’ career motivation, i.e., employees’ career resilience, insight, and identity. This article describes how the organization’s support for employees’ career motivation is influenced by the human resource strategies adopted in times of organizational decline, merger, growth, start-up and redirection. The article also describes how employees’ career motivation influences their reactions to the corporation’s human resource strategies. A case example is given of a human resource plan to support career motivation.


This article focuses on internal motivation and external strategy. Corporations’ structure and behaviour coupled with the quality of its staff that will make the difference between winning and losing. For many companies in trouble, reasons for sinking in red can be found in internal management inadequacies rather than in storm raging outside. Anticipation is not practiced by decision makers widely. The tools of strategic analysis and prospective are useful for stimulating the imagination, reducing inconsistencies, creating a common language, structuring collective thought
and enabling appropriation. Developments in the environment, oblige a company to respond with both speed and flexibility. The human and organizational factor plays a decisive role in competitiveness. Managers who can establish authority through their competence and organization powers can allow co-workers to take initiatives. Managerial styles have gone and yet other common denominators remains that people need new challenges to motivate them.

**Problem Statement**

Behind every success of a person there is a kind of force which pushes him towards what he/she wants to achieve. The force that is mentioned above is the driving quality called motivation. Each and every human being needs to be considered as an asset by an organization. A person has his own interest in achieving his individual objective. But from organization’s perspective, he needs to be motivated for reaching the organizational goals. So, organization’s first step towards success lies in its relationship with employees. Employee’s motivational level is directly proportional to organization’s status/success. Higher the motivational level, higher will be the ratio of success. Motivation is the heart and soul for an employee to climb up the ladder and succeed individually and also officially. It brings in a person the ability to face difficult situation and also the power to overcome it. It brings out the ‘REAL WHO’ of a human being.

**Objective of the Study**

To study the factors that promotes motivational behaviour among AAI employees.

**Research Methodology**

Research methodology involves selecting the research design for the study. The research design provides a systematic framework for conducting research investigations. Descriptive research design is used in the study as the study is conducted for a definite purpose. Primary data is collected by the use of structured questionnaire. The sampling procedure adopted in the study is unrestricted or simple random sampling. The survey was conducted in Airports Authority of India, Meenambakkam, Chennai with a total of 310 employees as sample Size. The data have been analyzed using SPSS Version 11.0.

**Hypothesis**

1. To find out the relationship between the gender of the respondents and the level of satisfaction of the employees on monetary benefits.
2. To test if the response of the respondents differ with work experience and criteria for employee promotion.

**RESULTS & DISCUSSION**

- From the study, it is found out that most of the employees had the same feeling about the organization before and after induction. Neutral response was provided.
- Most of the respondents informed that sufficient information was given to the employees about the organization during orientation.
- Most of the employees were assigned the job for which they were recruited and oriented.
- It is observed that good ambience and inspiration to perform the job with dedication urges the employees to give their full concentration to work and good support from supervisors is extended to employees.
- Few employees accepted that organization has evolved itself according to the changing technological changes.
- Monetary benefits, non-monetary benefits and fringe benefits are provided to employees for their devotion towards their job and organizational goals.
- Certain employees praised the organization for taking involvement in motivating employees to balance their work-life with that of their personal life.
- From the study, it is observed that promotion of an employee is based on seniority.
- It is found that technical, finance and commercial personnel are given training periodically through various training institutes of AAI and in-house training is provided to Ministerial staff.
- Almost all employees agreed to the fact that they get full support from Employees Trade Union and that they are satisfied with the retirement policies.

**Statistical Inference**

*Chi Square Test*
This was used to find out the relationship between the gender of the respondents and the level of satisfaction of the employees on monetary benefits.
TABLE 1

<table>
<thead>
<tr>
<th>Gender Satisfaction</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely Satisfied</td>
<td>75</td>
<td>50</td>
<td>125</td>
</tr>
<tr>
<td>Satisfied</td>
<td>45</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Neutral</td>
<td>50</td>
<td>30</td>
<td>80</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>135</td>
<td>310</td>
</tr>
</tbody>
</table>

TABLE 2: CHI–SQUARE TEST

<table>
<thead>
<tr>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson chi-Square</td>
<td>11.022&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>12.845</td>
<td>3</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>0.415</td>
<td>1</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>310</td>
<td></td>
</tr>
</tbody>
</table>

Source: <sup>a</sup>2 cells (25.0%) have expected count, less than 5. The minimum expected count is 2.18.

Chi–Square Value = 11.022, P Value = 0.012, α = 0.05, Since 0.012 < 0.05, H₀ is rejected

Inference

There is a relationship between the gender of respondents and the level of satisfaction of the employees on monetary benefits.

ANOVA

To test if the response of the respondents differ with work experience and criteria for employee promotion.

TABLE 3: BETWEEN-SUBJECTS FACTORS

<table>
<thead>
<tr>
<th>Work Exp.</th>
<th>Value Label</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 5 yrs</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>5-10 Yrs</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>10-15 Yrs</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>15-20</td>
<td>75</td>
</tr>
<tr>
<td>5</td>
<td>Above 20 Yrs</td>
<td>90</td>
</tr>
<tr>
<td>Criterion</td>
<td>Seniority</td>
<td>150</td>
</tr>
<tr>
<td>2</td>
<td>Performance</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>Achievement</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Experience</td>
<td>15</td>
</tr>
</tbody>
</table>
### Table 4: Test of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>107544.661</td>
<td>7</td>
<td>15363.523</td>
<td>90.426</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>109542.551</td>
<td>1</td>
<td>109542.551</td>
<td>644.742</td>
<td>.000</td>
</tr>
<tr>
<td>Work Exp.</td>
<td>36923.155</td>
<td>4</td>
<td>9230.789</td>
<td>54.330</td>
<td>.000</td>
</tr>
<tr>
<td>Criterion</td>
<td>29856.489</td>
<td>3</td>
<td>9952.163</td>
<td>58.576</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>51310.178</td>
<td>302</td>
<td>169.901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>563500.000</td>
<td>310</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>158854.839</td>
<td>309</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = 0.677 (Adjusted R Squared = 0.670)

### Work Experience

P Value = 0.000, α = 0.05, Since 0.000 < 0.05, H₀ is rejected

### Criteria for Employee Promotion

P Value = 0.000, α = 0.05, Since 0.000 < 0.05, H₀ is rejected

### Inference

The response of the respondents differs with both the work experience and the criteria for employee promotion.

### Suggestions

- Induction programme can be made more interactive so as to motivate employees to come out of their inhibitions and get involved to environment prevailing inside the organization.
- Assessing employees understanding about organization can be introduced in orientation session to analyze employee's interest in the happening of organization.
- Employees felt that the job they do is the job they were recruited for and they have got aquainted with it with the passing time. Few activities can be conducted weekly or monthly for the employees to eradicate monotony and make them enthusiastic for the following week/month.
- All motivational ideas are used by AAI to reach its employee and get the work done by them to reach organizational goals.
- While excellent training is provided to technical, finance and commercial staff, the training provided to ministerial staff may be improved by giving training to the volunteers instead of nominees.
- Training is a field which provides good return on investment for an organization if planned and implemented perfectly.
**Conclusion**

An organization is a place which consists of people (employees) who work to accomplish a common goal. The ultimate aim of any organization is to earn utmost profit in the long run by providing quality service and satisfaction to customers and its employees. Employees are to be considered most important, as their efficient performance is necessary to reach the organizational goal. Organization should treat employees as its own family and take care of their basic, security, social needs so as to obtain their full support in reaching the peak (goal). Motivation is the tool used by organization these days to get the work done by the employees. AAI has understood its employees so well that all the policies put forth by AAI are considered the best motivational tactics. Be it salary, perks, compensation, rewards, fringe benefits—name it and it is used as a motivational element by AAI. Employees are respected for what they are and what work they do, by AAI. Senior employees are promoted and rewarded for their service to AAI. Interpersonal relationship between higher level, middle level and lower level employees within AAI can be rated as the highest. Environment prevailing within AAI also motivates employees to a greater extent. All factors that promote motivational behaviour among employees are being updated, keeping in mind the changes happening inside and outside the organization.

**References**


A Critical Perspective of Information Technology (IT) Industry Growth in India

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Abstract—It is very much evident that the growth agenda being prescribed for the sustainable development of many emerging economies like India has a consistent reliance on the abnormality factor which is very popularly identified with the services sector in general and Information Technology sector in particular. The mushrooming growth rates and boom factors are no doubt, phenomenal in nature with respect to software sector in recent times and has drastically changed the economic landscape of India, in a way, providing new mantra for the growth of our economy. What makes it inevitable to depend on the inconsistencies and abnormality that form the major trends of information technology (IT) industry that penetrated deep into the nook and corners of the country? The most popular theory that caught the imagination of both entrepreneurs and government is that IT and IT Enabled Services (ITES) is the growth engine of economy, capable of meeting the foreign exchange reserves demand and people purchasing power at one stroke. At the same time, by systematically developing the inflow of foreign investments, the IT industry leads to the infrastructural advancement in various forms. Behind the conceiving of Software Technology Parks (STPs), IT Special Economic Zones (SEZs) as a major tool to trigger the economic growth rates, one has to look at the changing configurations of the industry in the light of many human-related issues and implications. As such, the article tries to recap the penetration of IT industry in India from a critical perspective by supporting the idea of adding a real human face to its further development in the country. Also, the basic issues like employee satisfaction and commitment get highlighted as part of narrating the growth story of IT industry in India.

Keywords: ITES, Outsourcing, Sustainability, Knowledge Economy, Innovation, Culture, Satisfaction, Commitment, Professional

INTRODUCTION

The Indian Information Technology industry continues to grow at a blistering pace. It contributes significant amount of employment and to increase the share of gross domestic product of the country. The contribution of the IT sector to India’s GDP rose to approximately 8% in FY13 from 1.2% in FY98. The main advantage in the global IT and ITES-BPO industry is that there is availability of an abundant, high quality and cost-effective pool of knowledge IT employee in India. India has cost savings of 60%-70% over source countries. According to the National Association of Software and
A CRITICAL PERSPECTIVE OF INFORMATION TECHNOLOGY (IT) INDUSTRY GROWTH IN INDIA

Services Companies (NASSCOM) the IT sector is expected to employ about 3.0 million people directly and around 9.5 million indirectly in the FY 2013–14.

**TABLE 1: MARKET SHARE OF IT PLAYERS BASED ON REVENUES (2012)**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCS</td>
<td>10.7%</td>
</tr>
<tr>
<td>Wipro</td>
<td>7.2%</td>
</tr>
<tr>
<td>Cognizant</td>
<td>6.8%</td>
</tr>
<tr>
<td>Infosys</td>
<td>6.3%</td>
</tr>
<tr>
<td>HCL Tech</td>
<td>4.2%</td>
</tr>
<tr>
<td>Tech Mahindra</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

*Source: Bloomberg and IBEF*

TCS is the market leader accounting for about 10.7% of India’s total IT & ITeS sector revenue and employees more than 2,20,000 workers in India. The top six firms contribute around 36% to the total industry revenue, indicating that the market is fairly competitive.

![Fig. 1: Market Size of IT Industry in India (USD Billion)](source)

*Figures in Billion USD
Source: NASSCOM*

In the year 2006–07 witnessed a revalidation of the Indian Information Technology. Business Process Outsourcing (IT-BPO) growth story, driven by a maturing appreciation of India’s role and growing importance in global services trade. Industry performance was marked by sustained double-digit revenue growth, steady expansion into newer service-lines and increased geographic penetration, and an unprecedented rise in investments by Multi-national Corporations (MNCs)—in spite of lingering concerns about gaps in talent and infrastructure impacting India’s cost competitiveness. US has traditionally been the biggest importer of Indian IT exports; over 60% of
Indian IT-BPM exports were absorbed by the US during FY13. Total exports from the IT-BPM sector (excluding hardware) are estimated at US$ 76 billion during FY13; the industry rose at a CAGR of 13.1% during FY08/3 despite weak global economic growth scenario. Positive market indicators including large unaddressed white-spaces and the unbundling of IT-BPO mega-deals with increasing shares of global delivery, strongly support the optimism of the industry in achieving.

**INDIA AS A KNOWLEDGE ECONOMY**

The economic value of IT depends greatly on the levels of economic progress a nation has already achieved. IT has the potential to make existing processes more effective and efficient, but cannot substitute for the lack of a basic infrastructure. What is good for a developed country like the U.S. is not necessarily optimal for a developing country like India when those basic elements of infrastructure that support a successful economy such as educational opportunities, healthcare, electricity, drinking water, and capital are still in short supply. The impact of IT is best understood when the fundamental differences between the innovations and ventures of industrial and knowledge-based economies are recognized. Industrial growth yields from investments in large-scale infrastructure (e.g., railroads, roadways, power grids, and dams). These investments, in turn, support the growth of physical-asset intensive industries (e.g., the steel, chemical, and transportation industries) that create and move physical entities (e.g., people, water, and goods). The ventures of an industrial economy typically employ large number of workers with minimal training, education, and skills. These ventures have the potential to uplift large sections of the population.

In contrast, innovation in the knowledge economy usually engenders highly specialized knowledge-intensive products, and the large-scale capture, movement, and usage of information using sophisticated network infrastructure (e.g., computers, cable, fibre, and routers). Beyond the physical labour required for initial construction, building and maintaining this kind of infrastructure requires specialized skills and training. It follows that the IT sector, in itself, would offer relatively modest employment opportunities for India’s teeming population, even if India was to become the world’s software factory.

Further, despite all the hype of moving into a ‘new’ economy, the fact is that economic development is cumulative. The past matters because economic development builds on preceding accomplishments.
The industrial economy made agriculture more efficient and productive. The productivity of agricultural labour skyrocketed with the use of industrial and biological innovations including tractors, fertilizers, irrigation systems, pesticides, and genetically engineered seeds. It is not surprising; therefore, that the greatest source of real productivity, growth, and efficiency attributed to the information economy derives in the long run not from the information economy itself, but from its effects on the industrial economy. For example, the intelligent use of IT can help product distribution channels and manufacturing plants to work more efficiently.

Historically, sustained industrial innovation in developed economies has created great wealth and improved living standards across societal divides. This progress has set them up in an ideal position to exploit and create knowledge as they transform into knowledge-based economies. One aspect of this transition is that, increasingly, labour-intensive manufacturing and low-end service jobs are being outsourced to countries with lower labour costs. China has captured much of the lucrative manufacturing market, ensuring millions of jobs for its citizens. India would benefit much from aggressively pursuing such manufacturing facilities that have potential to serve both the export and domestic markets, particularly in view of its high levels of unemployment.

The ‘leapfrogging’ argument, whereby India skips massive industrialization and moves straight into the information economy, is suspect. Proponents of the leapfrogging argument frequently advance the example where Indian villages without any electronic communications directly adopt a cellular phone, rather than work their way up through physically connected communication systems. The problem with this
example is that, while it provides for some excellent symbolism, the underlying argument is not scalable to a national economy. Consider, for instance, the industrial transportation system.

A strategic way of achieving job satisfaction is to establish a corporate culture that encourages communication and is directed towards quality work. It is particularly important for employees to see excellence rewarded, to not fear making mistakes, to work in an atmosphere of helpfulness, and to see a relationship between hard work and rewards. As the tool for such strategic changes, organizational culture can be altered by reshaping functions, such as the communications systems and by building teams and creating leaders. Managing change is the challenge for today’s businesses and its success or failure will judge the viability of any firm in the years to come.

Employee satisfaction refers to an employee’s feelings towards his/her job. Job satisfaction has been defined by Locke as a pleasurable emotional state resulting from the appraisal of one’s job. Job satisfaction describes how content the employee is with his or her job. The attitude of an employee plays an important role in his being satisfied with the job. There are a variety of factors that can influence a person’s level of job satisfaction; some of these factors include the level of pay and benefits, the perceived fairness of the promotion system, quality of the working conditions, leadership, organizational culture and social relationships, and the job itself. Thus, several job elements contribute to job satisfaction/ dissatisfaction.

Globalization of trade and liberalization of business and competitive market economy have changed the global industrial scenario. Indian industries are no exception. They also experience downsizing, greater use of contract labour, outsourcing and externalization. These changes directly or indirectly affect the attitude and behaviour of the working people and the working conditions. The advent of the knowledge industry (concept that integrates knowledge management, knowledge organizations, and knowledge markets) has given rise to a new category of employees—knowledge workers. A knowledge worker, a term coined by Peter Drucker in 1959, is one who works primarily with information or one who develops and uses knowledge in the workplace.

The average attrition rate in the knowledge industry is increasing alarmingly. Moreover, HR professionals all over the world, working in the BPO industry and in the IT industry, are trying to formulate retention strategies with little success. Job satisfaction helps management reduce absenteeism, labour turnover and stress. Additionally, there are benefits for
society in general. Satisfied employees are happy and better citizens. Professor Deborah Tarrant says that optimistic and happier people deliver better results. Organizations can improve performance by playing to the ‘signature’ strengths of individuals, enabling them to work more productively by nurturing greater satisfaction and fulfillment. As job satisfaction is dynamic, it can decline even more quickly than it develops. We cannot say that any one motivating factor would result in an equal level of job satisfaction for different individuals. The level of job satisfaction due to the same motivating factor may vary from person-to-person, organization-to-organization and even country-to-country.

**IT Job Growth and Government Investment**

From a social planner’s perspective, it is important that wealth not only be created at a societal level, but that different sections of society benefit in some measure from such wealth. The development of IT in India has, by and large, focussed on developing and delivering IT services to support the more advanced economies of the world (e.g., U.S., Japan, England, and Germany). Even if the most optimistic projections of the IT-related job creation (including jobs associated with IT outsourcing, call centres, and design centres) in the next decade come true, this industry will employ, at the most, a couple of million people. In a nation with over 1 billion people, this level of employment can make but a minor dent in the employment statistics.

Call centres, by and large, are commodities. Due to intense competition, prices for some of these services have fallen so dramatically that many call centres are already struggling to survive. Also, it is very likely that other developing nations with even cheaper labour and growing English-speaking populations will compete with India in this area in the near future. Call centres, unlike manufacturing plants, can be shifted easily from one country to another—it is difficult to achieve ‘lock-in’ in this arena.

Further, the IT industry holds limited potential for wealth to trickle down to the poorer sections of society. Unlike a steel plant or a power plant, IT engenders few opportunities for the unqualified. Any transfer of wealth from the IT sector (e.g., by taxing the IT sector to fund social spending) would be achieved through the heavy hand of government, which represents, at best, a dubious economic proposition. In fact, one consequence of the IT revolution in India, at least in the short term, will likely be the establishment of a digital divide, where the rich and educated are empowered and enriched by IT, and the poor are oblivious to its impact.
Before embracing IT as the engine of growth, Indian social planners need to take a hard look at those investments that are likely to yield the greatest returns at a societal level. Let us consider, for example, one sector that is far removed from high-tech world—the jute industry. In late 1980s, while working for an industrial development bank, one of us was puzzled about the government’s blanket ban on the use of plastic material (e.g., HDPE) to package cement, fertilizers, sugar, food grains and other commodities—only jute was to be used. From a purely economic perspective, considering that jute bags were more prone to spillage and rat-induced destruction, this regulation appeared to have no rational basis (jute packaging has much improved since then). However, in retrospect, given the millions of people employed in that industry, and the economic and political upheaval that would incur if that industry rapidly declined, this policy probably had some important redeeming features.

What does IT have to do with the jute industry? At first sight, very little; but on deeper introspection, plenty. Rather than harping on the IT industry itself, imagine using the power of IT to expand the domestic and export market base for jute products, to position jute as a biodegradable material that is safe and cheap relative to plastics, and to improve the efficiency of local jute markets so that jute growers can get better prices. Now imagine how the benefits that would potentially flow from such initiatives could positively affect millions of Indian households.

**GENDER ANALYSIS OF EMPLOYED IT PROFESSIONALS**

However, NASSCOM says industry employees 30%–35% of female employees and of these only 20% women work in urban India. This trend has direct impact on the positions filled up by women in IT-BPO; the bottom of pyramid having gender ratios upto 40%. This brings out a harsh fact that female employees occupy more positions at lower level of organization. Another important aspect to be considered is the attrition, especially among women as can be seen from the table below the major reasons for attrition among women are social which highlights that there is a strong need to make Indian women more Independent.

**Table 3: Top Reason for Leaving Organization**

<table>
<thead>
<tr>
<th>Women</th>
<th>Men</th>
<th>Common</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriage</td>
<td>Better Job Profile</td>
<td>Growth opportunities</td>
</tr>
<tr>
<td>Family/Children</td>
<td>Better compensation</td>
<td>Education</td>
</tr>
<tr>
<td>Relocation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: NASSCOM Research*  

158
HUMAN RESOURCE DEVELOPMENT

HRD activities are targeted to ensure availability of trained human resources for the manufacturing and service sectors of electronics and IT industry. Initiatives include identifying gaps emerging from the formal sector, planning programmes in non-formal and formal sectors for meeting these gaps. In pursuance, projects have been initiated for generation of quality manpower in the areas of Information Security and VLSI Design; setting up of a Regional Institutes for e-Learning and Information Technology (RIELIT) at Kohima, Nagaland and at Tripura, Agartala for creating skilled manpower in the area of Computer Science/ IT. A Scheme for Manpower Development for the Software Export Industry has also been initiated under which various projects are being implemented. The Department has also set up a Working Group on Human Resource Development in Information Technology. The main objective of the working group is to evolve long-term HR strategies and suitable approach for the implementation of these strategies for significantly increasing the number of well-trained professionals in line with economic projections, for various IECT and related areas.

Several industries, based on their domain expertise have been approached, for IT support developments, in the non-IT Manufacturing, Trade, Energy and Services, in the broad areas such as extended ERP, extended SCM, extended CRM. The government is committed to the development of weaker section for the inclusive growth. Department accordingly has supported ICT projects for development of SC/ ST.

Gender empowerment through ICT has been one of the major initiatives of the government. The objective of the initiative is to empower women through capacity building in ICT, entrepreneurship development and IT training so as to enhance their employability in IT/ ITES sector where the employment opportunities are growing. Department has supported ICT projects relating to empowerment of women.

CONCLUSION

By identifying the fact that the growing fascination for IT related educational programmes rather career-mindedness among Indian middle class youth no doubt, bears the testimony for the India’s success story. The government has to embark upon new initiatives in the direction of making it a sustainable venture. The growing presence of Indian diaspora in Silicon Valley presents a new challenge in the form of changing the configurations of IT industry from a back-end services provider to that of a more innovative product maker by identifying the most pertinent domains where the information technology (IT)
can be the real differentiator in terms of fulfilling the aspirations of stakeholders. What needs to be done further in direction of making the IT professionals more organizational committed which alone can address the basic issues of growth and survival of the industry. This no doubt, enables a full length study to be undertaken by the management scholars and practitioners. The multi-dimensional outlook held by the new generation IT workers has really paved the way for the so called abnormality and inconsistency factors that need to be regulated in the larger interest of the industry.

REFERENCES

Corporate-NGO: Need of Hour for Premeditated Improvement of Indian Tribes

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Abstract—The paper highlights the tribal situation and their problematic areas in the country. It further investigates and evaluates the various initiatives taken by corporate and NGO for the empowerment of poor tribe. Finally, in the light of initiatives of corporate and NGO, limitations in development of tribal has been identified and is recommended to integrate the philosophy, politics, and economics of corporate and NGO at practical level for the benefit of poor tribal by unfolding the successful examples of partnership. Partnership between corporations and non-governmental organizations (NGOs) are the best way for the promotion of sustainable development of the Indian tribe. The partnership is aimed at the mutual benefits of all i.e., corporate for CSR, NGOs for their mission and tribes for sustainable development.

Keywords: Tribe, Development, Corporate, NGO, Corporate-NGO

INTRODUCTION

It is fascinating that, about a half of the tribal of the world, i.e. 84,326,240 are living in India as per 2001 census. It constitutes 8.14% of the total population of India and cover about 15% of the country’s area (Gautam, 2009). There were about 635 tribal groups and sub-groups including 75 pre-historic societies, who are antique, works on pre-agricultural level of expertise, stumpy literacy, sluggish or retreating population size, isolation from the mainstream of population, and economically backward. A total of 52% of the tribal population is Below Poverty Line and 54% tribals have no access to economic assets such as communication and transport (Bhasin and Walter 2001).

British government, caste system, Indian political system, tribal themselves, and non-tribal community are responsible for the backwardness, extremes and exploitation of tribal.

Distinguishing the exceptional requirements of weaker segment including ST, the Constitution of India guarantees fairness by law for everyone (Article 14), it also affirm upon the state government to make particular provisions to control discrimination of any socially and economically diffident society (Article 15–4). It authorizes the state to make provisions for reservation in jobs in support of any backward class citizens who are not
properly symbolized in the services (Article 16–4). Further, it enjoins upon the state to promote with special care for the educational and economic empowerment of the weaker section and, in particular, the STs. The section also promises to protect the section from social injustice and from all types of exploitation (Article 46) (Pandey, 2005).

To encourage the welfare of STs and for elevating the level of ST areas from the rest of the State (Article 244), and extraordinary financial help is guaranteed under the articles of constitution (Article 275–1) (Pandey, 2005). Articles 330, 332, 335, give the privileges by reserving the seats for tribal in State Legislative Assemblies, education and in government services. The Article 340 of the Indian Constitution authorizes the State to appoint a Commission to examine the situations of the socially and educationally backward classes and Article 342 specifies tribal societies as STs (Pandey, 2005).

To ensure effective participation of the tribal in the process of planning and decision-making, the 73rd Amendment of the Constitution has been extended to the Scheduled Areas through the Panchayats (Extension to the Scheduled Areas) Act, 1996 and many more. But even after having the privileges for tribal from the Indian Constitution, tribal are the worst sufferer community struggling for existence till date due to certain key problems.

**OBJECTIVE OF THE STUDY**

The objective of this paper is to explore the problematic areas of Indian tribes, study the various initiatives taken by corporate houses and NGOs for the sustainable development of tribes and to suggest the best possible solution for the empowerment of tribes by integrating two, in the form of partnership i.e., Corporate-NGO.

**METHODOLOGY USED**

The secondary literature used, is extensively drawn from the in-house and proprietary sources available at their websites. The other sources include, research papers published in journals, books and news agencies portals, etc. The information has been cross-checked and validated to provide the latest and unambiguous information. The data sourced from above has further been edited and categorized to make it suitable as per the objectives of the study. The corporations and NGOs to study the initiatives as individual and as in the form of partnership have been chosen by using convenient sampling.
KEY SECTORAL PROBLEMS OF TRIBAL DEVELOPMENT

Language is one of the main problems in tribal education. The majority of the tribal languages and tongue are in the most undeveloped juncture and it is difficult to find any written literature. Tribal education in India has spread in a haphazard way due to negligence and least care. Further, it has become instant failure due to lethargy, indifference and lack of interest (Tanwani, 2009). Other problems include absenteeism in schools. One can see a large number of students on rolls but the actual attendance is very low, and the numbers of students passing in the final examinations are lower. Other key problem in tribal development includes:

Health and Nutrition

The tribal communities in general and primitive tribal group in particular have been disease-prone in certain respects and have little access to basic health facilities, despite the fact that norms for establishing of sub-centres, primary health centre and community health centre have been relaxed for tribal areas (Balgir, 2006). Their depressive health situation is multifaceted by unawareness of causes of diseases, antagonistic environment, poor hygiene, shortage of safe drinking water and blind belief etc.

The tribal suffer from many chronic diseases but among all, water-borne is at the top. Unsafe drinking water is the main cause of water-borne diseases. Due to constraints, tribals are forced to consume dirty and contaminated water which causes skin disease, intestinal diseases, diarrhea, dysentery, cholera, guinea worm, and tape worm, etc (Balgir 2005). Infant mortality is higher in tribes as compared to non-tribes. Statistics about the tribal say that 79.8% of tribal children are anemic and 50% of the children are born underweight. Tribals are very much fond of spirit and highly intoxicating liquor and drinks. These drinks are also one of the important causes of poor health.

Literacy and Education

In the glow of the precedent hard work, it was not scandalous before 1950, as the Government of India had no direct programme for the education of the tribal. With the adoption of the Constitution, the promotion of education of scheduled tribes has become a special responsibility of the central as well as of the state governments (Sujatha, 2001). The total figure of reach of education among the tribal is not very cheering, except for few tribes of north-eastern region like Khasi, Naga, Mizo & the Garo, etc., who gained the advantage from the gigantic system of Christian disciple institutions.
It is still an extensive sensitivity among the tribal that education will cut off their son from the relationships of families and villages other than the community of NE tribal. Tribals believe that by proper education, the boy will become disobedient and alienate the family from the rest of their society, while the girls will turn modern and will go off the track. A few tribal communities believe that their supernatural power shall be annoyed, if they send their kids to schools operated by some other community (Sedwal, 2008).

Moreover, the social factors explained above, and economic factors, both are responsible for lack of educational interest of tribal people. Since, tribal are bound to live in horrible poverty, and find it difficult to survive as they think that, by sending the child to school, they will lose helping hand in the struggle of endurance (Sedwal, 2008). Tribal parent feels that sending a child will curtail the earning of the family and they will have to feed the child also.

**Tribal Agriculture**

Today, the tribal majority area, which is also the nation’s major forest regions, is the most poverty-prone region (Balgir, 2005). Horticulture is slightly developed in the tribal areas with the cultivation of fruits, vegetables, and spices. It accounts for only 2.5% of the tribal cultivated area (Elwin, 1963). Despite the most demanded resource situation and cultivation in tribal areas, the region is suffering from poor infrastructure, poor returns from agriculture and poor HDI. Some bare statistics on agriculture in tribal areas are (Beck and Ghosh, 2000):

- Net irrigated area is 14.98% in tribal area against 33.59% as All India.
- Net area irrigated by major irrigation systems is 3.66% against 9.89% as all India.
- Net area irrigated by minor irrigation is 16.83% against 42.28% as all India.
- Groundwater is 11.32% in tribal areas against 24.28% as all India.
- Surface lift irrigation is 5.51% in tribal areas against 18.00% across all India.
- Worth of agricultural product (in Rs/ha) is 2697.55 in tribal areas against Rs. 8578/ Ha as All India.

Meeting of food requirements from agriculture by the tribal is determined by the type of land they own, the size of the holdings and the size of the household. In the ancient times, tribals were able to manage the food
requirements from the forests. But massive destruction of forest has reduced the accessibility of natural foods for the tribals from forest and in result they are bound to meet their food requirements by purchasing.

**TRIBAL DEVELOPMENT PROJECT OF CORPORATE**

To uplift the socially and economically backwardness of the tribal, the government of India and state government are trying their level best. Corporate houses are taking the initiatives under the corporate social responsibility while NGOs on their own sensitivity, with the help of charity, donation and government fund are on the track to initiate the development of the tribes. Few of the examples of corporate initiative and NGOs in India are the following.

**Bajaj Group**

Bajaj Group, in year 2009, had conducted 60 health check-up camps including the health check-up initiated with Kamalnayan Bajaj Hospital of Aurangabad. The Group introduced mobile clinics in 20 villages of Pune. Mobile van was equipped with all necessary requirements with a lady doctor and nurse for the primary health care of poor tribals (Bajaj, 2009). The K B Hospital established by the group on regular basis provides help to BPL and economically feeble tribes by free/cheap treatment.

**Moopy Valley Group**

Moopy Valley Group in the year 2011, under the CSR initiatives of Harrisons Malayalam Ltd, had taken the CSR initiative by distributing educational books to more than 100 tribal students (*Business Line*, 2011). The students were from Anapandam, Kallichittra, Olanaparambu, Malampathy, and Echipara villages of Thrissur district. They had distributed the kit and books at a function organized to celebrate the third anniversary of M A Kumaran Smaraka tribal leader, who worked for the welfare of the tribal community in Amballoor, in Thrissur district. On regular basis, the group is sponsoring a number of tribal students for higher studies.

**Indian Oil Corporation**

Indian Oil in their welfare initiatives, are empowering tribal women by organizing health check, informing about family welfare and sanitation, providing schooling and pure drinking water, creating awareness about environment security, in the tribal areas of Assam (Tiwari, 2011). Every year, Indian Oil uses a set amount of its income and tries to provide the smiles to millions of SC and ST people through their society wellbeing and growth.
schemes. On average the IOC spends one-fourth of the society well-being fund on the well-being of tribal community throughout the country.

**Hariyali Group**

Hariyali made their presence in the form of Kisaan Bazaar’s through 24 operational centres in MP, Rajasthan, Uttrakhand, UP, Punjab and Haryana. The group has a plan to increase the presence, of Kisaan Bazaar in the next few years. The Hariyali Kisaan Bazaar’s is an absolute model for the development of tribal farmers in the area. The Hariyali Kisaan Bazaar is the complete solution for the weaker farmers including tribe under one roof (Narang, 2008). The initiative empowers the tribal farmer by giving the information of agri-product, rate, market, credit facilities, and improved cultivation methods.

**Dawat Group**

LT Overseas is a premier company in the business of milling, and marketing of branded and non-branded basmati rice. The flagship brand of the company is DAWAT. It also manufactures rice food products and supplies in the domestic and overseas bazaar. It has contract farming agreements with the tribals, which is a good and mutually benefit scheme dedicated for the development of tribal region. Group for the purpose signed the agreement with Tata Chemicals, MoU with Madhya Pradesh State Industrial Corporation to set up an Rs 600 million rice milling and rice food processing project, and have strategic alliance with Phoenix Agri Silica Corporation (Chatterjee, 2007).

**TRIBAL DEVELOPMENT PROJECT OF NGO**

**Smile Foundation**

Smile Foundation, a NGO, has initiated a scheme titled ‘Promoting Children’s Education & Health in Wetlands of Deepor Beel’ to reach the unprivileged tribal children in district Kamroop of Assam. This project was initiated in the village Pamohi. 6 Non-Formal Education Centres (NFE) were established under the scheme. The educational centers are able to provide the help to 200–250 underprivileged tribal children in a year. The purpose of the scheme is to bring the tribal children into mainstream through formal education system.

**Samajik Navnirman Sanstha (SNS)**

Samajik Navnirman Sanstha (SNS) is a NGO dedicated to provide free coaching and free computer education in tribal dominated areas. This
Corporate-NG : Need for Premeditated Impr vement f Indian Tribes

Project has two mechanisms. First is to offer free coaching on the subjects of school to the tribal students in the age group of 9–16. The second part of the project is to give the knowledge of Information Technology (IT) by bridging the digital divide and socio-economical status of tribal people (Dev. Nation, 2009).

Social Action for Tribal Health Education and Environment (SATHEE)
The NGO, SATHEE has been working in the field of tribal welfare and rural development since its inception from the year 1994–95. It has undertaken multifarious activities for the all-round development of the SC, ST, poor, women and children (Heifer, 2012). The NGO is working for prevention of women trafficking, HIV, AIDS, alcoholism, women health, child health, vaccination and health awareness programmes etc.

Pradan
Pradan NGO is having a mission to extend help in increasing the yield of agriculture in tribal area for making the life of tribal better (Prasad, 2006). Quite a good number of schemes of PRADAN are focused on agriculture, agriculture upgrading and the management of natural capital. Increasing yield and introducing new crop for better yield in the area is the main strategy of the scheme. To reach its objectives, the scheme trains huge number of young farmers.

Samavesh, Society for Development and Governance
NGO Samavesh is developing Krishi Mitra with rigorous training to the young farmers in inaccessible tribal area for improved agriculture and organic farming. The operational region of the NGO is Harada and Devas districts of MP (Singh, 2009).

Why Should Corporate Support Tribal Development?
This is an issue that has led to considerable debate. Essentially, there are two lines of arguments put forward for corporate involvement in social work (Bhatt, 2000). The first line of argument is at idealistic and aggressive position because corporates take so much from the society and in return they should compensate the society through social work and solving the social problems created by them. The second line of argument is practical and conciliatory. It argues that the corporate house gets involved in the development of weaker section due to their direct or indirect, and temporary or lasting interest.
The first line of arguments have important discussion base. Corporate houses get continuous support and help from the government in the form of amenities, tax dispensation, duty concession and infrastructure, and in lieu corporate houses must return something to the society. Corporate houses themselves are responsible for ecological imbalances; due to polluted manufacturing creating the problems of health and education backwardness due to lesser earning. Such disturbances in the domestic economy influence the deprived and weak clusters that experience the worst (Bhatt, 2000). Therefore, the corporate sector, which is responsible, must do something to empower poor, especially tribal.

The main argument of the second line of thinking advocates that corporate sector will build a good image with the communities, the government, and the society at large. Good image creates the enlightened customers and enlightened customers buy products from socially responsible companies (Bhatt, 2000). Even the multinational company will get quicker and easier acceptance and legitimization in the host country if it supports social causes. Companies can enjoy tax benefits for spending on social welfare and developmental activities (Pathak and Gour, 2001). If poverty is eradicated, runs the argument, then people’s purchasing power will grow and business will be benefited (Pathak and Gour, 2001).

This line of argument, however, has severe limitations. Business would contribute to social development only if it sees benefits for itself and not as a fundamental value and an integral part of its mission, then its contribution will be severely limited and, in some situations, could even lead to lopsided or distorted development. Therefore, business organizations should strongly be committed to social work not just to be in good business but because they believe in it as their duty to the society.

Though the skill of corporate to serve the society in all respect is undoubted, but as felt, it lacks the knowledge of real and existing system in the remotest area due to its absence. But the NGO, especially existing for the empowerment of tribal are much near to the situation and can handle the situation in a better way. The same is explained in below.
JUSTIFICATION FOR PARTNERSHIP WITH NGOs

Large to medium size corporate house establishments are mainly contributing through development work. For this purpose, corporate houses have initiated their own foundations and trusts instead of working in collaboration with NGOs. This is comprehensible that there is a great need of corporate involvement as partner with NGO for social development.

In the previous 25 years, the NGOs have taken immense pace in the meadow of development and social fairness. NGOs have made their presence in every part of the country including the farthest areas. They have developed wonderful imminent, talent, and competence and have explored the distinction between charity, relief, welfare, and development. The NGOs growth model is holistic and also deals with mistreatment, cruelty, and social justice issues. After understanding the socio-economic importance and its relationship within the communities NGOs have developed innovative and effective methods for reaching the poorest of the deprived (Bhatt, 2000). NGOs have worked for recipients and societies at the grassroots level but also for worldwide issues of environment, natural resources, gender biasness and inequality.

Corporate houses who are interested in development have erudite a lot from NGOs. Further, they will have to add strength by collaborating with NGO as to get improved techniques for reaching the poor (Ekka A., 2002). It is widespreadly said that in the Indian social milieu, it is hard to reach the poorest as there are vested welfare of the middleman, which spoils the flow of services and benefits to the poor.

Corporation may discover it complex to assume that such activities of development suffers awareness, concretization, and management of the poor, which require better delivery mechanism of the government, to reach the poor. Companies may find it more convenient to undertake development programme through NGOs, rather than directly by themselves, because of better access of NGO to delivery system (Venkateshwaran, 1995). Joint venture through NGOs can be helpful in such cases. Though the main benefit of joint venture for NGOs is money, but this association also looks for help in knowledge, equipment, utensils, organization advice, and scientific support. A few of the companies in past have helped NGOs for staff training, strategic planning, monitoring and evaluation system. Corporate may also learn the skills of serving the poorest from NGO.
It is said that in cooperation with companies, NGOs would learn more competency and productive techniques (Venkateshwaran, 1995). NGO-corporate, two large and strong sectors for social development, partnerships will bring together lots of resources and a variety of skills. If they are able to build partnerships, for the development of tribals in India, they can be a formidable combination to influence society, politics, and government. A few of the successful cases of Corporate-NGO partnership is discussed below.

**THRIVING CASES OF CORPORATE-NGO**

In the support of above discussion, a few cases of overseas, Indian corporate houses and NGO partnership working for the development of the economically backward people including tribals are depicted in Table 1.

<table>
<thead>
<tr>
<th>Corporate House</th>
<th>NGO</th>
<th>Project</th>
<th>Business Benefits</th>
<th>Social Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FedEx Express</td>
<td>Agriculture Development Fund</td>
<td>Developing agriculture efficiency in economically poor area</td>
<td>Established industry concern for poor Enhanced brand value Development experience with the NGO for further initiative</td>
<td>Increased efficiency of agriculture products Society is able to have better standard of living by increased earning</td>
</tr>
<tr>
<td>Eastman Kodak Company</td>
<td>The Nature Conservancy</td>
<td>China Photo Voice Project</td>
<td>Supported strategic growth and market-creation objective Enhanced brand value Supported product improvement and innovation</td>
<td>Visually documented environmental concerns and evidence of impacts Supported conservation planning Empowered remote villagers to voice their concerns</td>
</tr>
<tr>
<td>DuPont Environmental Defense Fund</td>
<td>Environmental Framework for Responsible Nanotechnology</td>
<td>Improved product stewardship Developed framework to identify, reduce and manage environmental, health and safety risks posed by an emerging technology Enhanced interactions with regulatory agencies Established technical leadership in the field Enhanced brand value</td>
<td>Gained a better understanding of the risks of nanotechnology to the environment and society Initiated discussion among key stakeholders Advanced nano risk assessment</td>
<td></td>
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</tbody>
</table>

*Table 1 (Contd...)*
### Table 1 (Contd.)

<table>
<thead>
<tr>
<th>Company</th>
<th>Initiatives</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Company</td>
<td>National Health Foundation</td>
<td>Establishing credibility and relationships with tribal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensuring better image of the company in country to get tax benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health checkup, vaccination, HIV drugs</td>
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<tr>
<td></td>
<td></td>
<td>Sequestered Health system in affected area</td>
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<tr>
<td></td>
<td></td>
<td>Creating public awareness and action</td>
</tr>
<tr>
<td>Johnson Controls</td>
<td>Bill Clinton foundation</td>
<td>Improving education level of the poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promoting the benefits of education among the poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Creating educated youth to energizing local economy</td>
</tr>
<tr>
<td>Tata Steel</td>
<td>Tribal Cultural Society (TCS),</td>
<td>Ensuring CSR</td>
</tr>
<tr>
<td></td>
<td>Tata Steel Rural Development Society (TSRDS),</td>
<td>Improved Social Morale for sustainability</td>
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<td></td>
<td></td>
<td>Enhanced Social brand image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provides sustainable livelihood to the community around its areas of operations</td>
</tr>
<tr>
<td>Glaxo Smithcline India</td>
<td>Gramin Aarogya Vikas Sanstha (GAVS),</td>
<td>Ensuring CSR</td>
</tr>
<tr>
<td></td>
<td>Tribal welfare projects in Peth Taluka, Nashik, Maharashtra</td>
<td>Enhanced Social brand image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curtailing the seasonal migration in the region, preventing migration of children for work in bigger cities &amp; increasing access to quality primary education for children support to the medical needs of the poorest tribal</td>
</tr>
<tr>
<td>Glaxo Smithcline India</td>
<td>Navjyoti India Foundation (NIF)</td>
<td>Ensuring CSR</td>
</tr>
<tr>
<td></td>
<td>Project to set up a community college at Naya Gaon, Gurgaon</td>
<td>Enhanced Social brand image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support to marginalized and vulnerable groups including women and children to provide quality education</td>
</tr>
</tbody>
</table>

*Source: Compiled by authors from websites and published reports*

## Conclusion

At present, a trend towards corporate involvement in social development is noticeable through good number of CSR initiatives. There is a sluggish but clear move on the part of corporate for social obligations. Many business organizations are viewing their business in the context of socio-political environment and trying to broaden their perspectives of development beyond
GNP and per capita income. There is also a noticeable budge away from donations and relief to societal growth. Companies are now getting concerned for developmental activities on a continued basis through by themselves or through their own foundations.

Corporations bring not only financial resources and practical skills but also a sense of accountability and a focus on results, which are often lacking in NGOs. If corporate houses are genuinely interested in the development of the poor, then they have to learn a lot from NGOs as NGOs have developed greater insights into the social and economic relationships and power patterns in our highly hierarchical social structure. NGOs, by their experience of serving poor, especially tribal population have now come up with creative approaches and strategies.

The Corporate-NGO partnerships discussed in Table 1 represent a diverse set of benefits for both, and experiences, from which the knowledge for conclusive recommendations have been derived. It will be good at the part of both the parties that corporate and NGO should come together and try to serve the poorest tribal in the country. Further, it can be said that a corporate-NGO partnership will require a commitment, mutual trust, mutual respect, agreed objectives, concerns for partner, as well as the willingness to understand the values and work together, like a few of the corporate-NGO has proven in past.

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Family Drove Indian Automobile Dealers are Resilient

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Abstract—India is a country where automobile industry is governed by macroeconomics like GDP but making or breaking a success of the brand is directly in the hands of appointed dealers in that particular territory. This paper tries to identify and evaluate the importance of family owned dealers, so called mom-and-pop firm, how they contribute to their success by being most of the times unorganized still resilient, maintain corporate identity of manufacturers brand and also how they adopt different downturn strategies and same is used in different ways for customer capitalization and sustain from non-family firms through fund management, with less ambitious plans, trading mentality, frugal need for quick and fast money, retaining well-deserved key employees.

Keywords: Resilient, mom-and-pop firms, GDP, corporate identity, downturn, frugal, customer capitalisation.

INTRODUCTION

Blood is thicker than water is not exception to Automobile Dealers in India, if we see by and large in any automobile distributors or dealers in India are invariably driven or rather dominated by family-owned business, always believe in getting their family members or close relatives for succession and are successful in doing so, simple reason being family business focus on resilience more than performance. To vouch, researcher carried out deep study and rigorous analysis in different parts of the world in different countries but fail to make in Asian companies because so many of them are family controlled that it's difficult to find a suitable comparison group (sample size) of non-family firms. This suffices the predominant presence of family firms in India.

INDIAN AUTOMOTIVE SECTOR

The Indian automobile industry has shown steady growth over the past few years, with several advantageous developments propelling it further; it has emerged as one of the best-performing sectors in the Indian industry.

Currently, being in the initial phase of life cycle slated for rapid growth, the automobile industry is governed by a multitude of factors including macro-economic variable; such as GDP components, industry production, inflation, interest rates, and stock indices. Sector variables like new model
launches, vehicle price and inter-segment competition, and enablers/barriers, such as, finance availability, road connectively, etc., also affect growth. There is ample growth opportunity, especially for two wheelers, as the market penetration for this segment is 55–61 units per 1,000 people, whereas penetration of cars is only 12 per 1,000 people.

Also, the government is currently in the process of establishing and enforcing emission norms in new vehicles, combined with upcoming safety regulation. PV price will rise to accommodate these features, and this price. Though rise in fuel prices are a concern, the only effect of deregulation of fuel prices in the immediate future will be on sale of diesel power trains, as the rate disparity between diesel and petrol continues to go down.

**Role of Dealer**

Once the vehicles are ready, they are shipped to the regional branch and from there, to the authorised dealers of the companies. The dealers then sell the vehicles to the end customers.

Dealer is the only contact point for customers and all information flow from manufacturers to customers flow through dealers only.

Vehicle order flows from Customers to Dealers to Manufacturers to different suppliers and in the reverse sequence, the product flow, Supplier to Manufacturers to Dealers to Customers.

![Fig. 1: Importance of Dealer (Supply Chain)](image-url)
While we talk about Customer Satisfaction to Customer Capitalization as dealer is the only chain who can bring the product and make it successful and also fail the product badly despite of the very good quality product.

Hence, a dealer can make or break through his organizational behaviour planning and run the business and make profit in an ethical way. Most of the dealers are all family firms.

Family firms always look for survival benefits for long term for their next generations and tries to compromise and are content by forgoing the excess returns available during good times in order to increase their odds of survival during bad times.

A CEO of family-controlled firm may have financial incentives similar to those of chief executives of non-family firms, but the familial obligation he or she faces will lead to very different strategic choices. They also try to manage their downside more than their upside.

So, how do family-run firms manage for resiliency? We've identified a few differences in their approach.

Some studies suggest that, on an average, family businesses outperform other businesses over the long term but other studies prove the opposite. Too much of confusion about family business, suggests something in addition to its main business a small mid-sized company with a domestic and familiar set of problems on succession quarrel with less importance.

According to Boston Consulting Group, while many of the mom-and-pop firms certainly fit that description, it doesn’t respect the powerful role that family-controlled enterprise play in the world economy. Not only do they include sprawling corporations such as Wal-Mart, Tata Group and Porsche, but they account for more than 30% of all companies with sales in excess of billion.

Conventional wisdom holds that the unique ownership structure of family business gives them a long-term orientation that traditional public firms lack. But beyond that, little is known about exactly what makes family business different. Some studies suggest that, on an average, they outperform other business over the long term but other studies prove the opposite.

To settle that question, research being conducted by the researcher at the Center for Management and Economic Research at Ecole Polytechnique compiled a list of 149 publicly traded, family controlled business with revenues of more than $1 billion. They were based in the United States,
Canada, France, Spain, Portugal, Italy, and Mexico. In each business a family owned a significant percentage, though not necessarily a majority, of the stock, and family members were actively involved both on the board and in management. Researcher then created a comparison from the same countries and sectors, which were similar in size but not family controlled. Then, after a rigorous analysis of the ways in which those sets of companies were managed differently and how that affected performance. (Researcher didn’t look at Asian companies because so many of them are family controlled that it’s difficult to find a suitable comparison group.)

The findings mentioned have been finalized after carrying out research, details of research locations and processes are as follows:

- Locations and processes of research study being conducted at various levels of automobile dealer workshops and showrooms for 3000 car owners opinions are taken and compiled through a server snapshots are available.
- 20 Car Dealer CEOs interviewed and took valuable inputs of family driven automobile dealers.
- Conducted Dealer General Managers Meet and took opinions from all dealer General Managers from different brands like Maruti, Hyundai, Tata Motors, Toyota, Honda etc.
- Also conducted interview of 10 Country Head- Services, of different brands, took their viewpoints on automobile car customers and dealers.

Research results show that during good economic times, family-run companies don’t earn as much money as companies with a more dispersed ownership structure.

But when the economy slumps, family firms far outshine their peers and when looked across business cycles from 1997 to 2009, found that the average long term financial performance was higher for family businesses than for non-family businesses in each and every country examined.

The simple conclusion emerged from the research is that family businesses focus on resilience (recover quickly from different conditions) more than performance.

The performance of family business looks very different from that of traditional public companies.
Indian Automobile Dealers are Frugal (Use of Money Cautiously) in Good Times and Bad

After years of my experience with automobile dealers with their family businesses, I observed successful dealer principles are always: try, inculcate the best values to the next generation but not giving them directly lavish office and lifestyle cars but try to give the feel of how employees come to office by forcing them to travel by local trains in Mumbai. Dealers always try to reduce expenses by having simple offices unless there is compulsion from manufacturers to maintain CI Corporate Identity. Just by walking into the lobby of corporate offices we realize cost-consciousness of a dealer who strongly believes in the principles of ‘money saved is money earned’.

They Keep the Bar High for Capital Expenditures

Family controlled firms are especially judicious when it comes to capital investment. Owner at a family firm believes ‘not to spend more than earning’. This sounds like simple good sense, always earn more, spend less, enjoy surplus funds and make best use of funds for expansion and for recession but the reality is, you never hear those words uttered by corporate executives who are not owners.

Owners are more stringent, family business tends to invest only in very strong projects. So they miss some opportunities hence they underperform during periods of expansion, but in times of crisis their exposure will be limited because they’ve avoided borderline projects, thereby, avoiding cash black holes.

They Carry Little Debt

It is in the genes of Indian businessmen to save more for old age unlike the Western culture. In modern corporate finance a judicious amount of debt is considered a good thing because financial leverage maximizes value creation. I have more examples to share where new partnership firms, partners always take bare minimum amount to run their family, leave most of the cash in the firm to avoid giving away too much power to banks.

They Acquire Fewer (and Smaller) Companies

What I observed from experience, dealers normally never think of any diversification but certainly try to expand existing business in a limited capacity without taking high risks.

They favour smaller acquisitions close to the core of their existing business or deals that involved simple geographic expansion.
Each year, while non-family businesses normally go for acquisitions taking big risk, may get the timing wrong and invest just before a downturn, and more importantly, alter the culture and fabric of the corporation.

**Many Show a Surprising Level of Diversification**

In recent past, however, well-established dealers started taking calculative risks into diversification from their core business, keeping in mind to cope up with the recession in automobile business, some family had expanded into new lines of business organically; others had acquired small entities in new fields and built on them.

Family owners spoke to whom the researcher spoke with, say that as recessions have become deeper and more frequent, diversification has become a key way to protect the family weather. If one sector suffers a downturn, business in other sectors can generate fund that allow a company to invest for the future while its competitors are pulling back.

Family controlled automobile dealers companies are not ambitious about their overseas expansion unlike other business segments. Maybe they inherit the quality and attitude of traders and normally they don’t want to block their money for long terms and thus, they are very much scared to enter a new market.

**Automobile Dealers always Retain Employees of High Standards**

For years, managers have been advised to ‘think like an owner’. The rules of family business show how to translate that thinking into actual strategies. It may not be possible as they believe on case-to-case basis, thereby climbing the ladder of top management in family firms is very big challenge but on the contrary, if person is honest, hard working and more loyal to the firm may go to any extent even though their educational qualifications is much below norms.

Retention at the family run business studies was better on an average versus at non-family firm turned over at a top management cadre whereas in lower cadre turnover is high due to less remuneration provided to achieve more profits, here salary is always considered as growing overheads and increase recurring cost.

The leaders of family companies extol (praise enthusiastically) the benefits of longer employee tenures: higher trust, familiarity with co-workers’ behaviours and decision-making a stronger culture.
Interestingly, family business generally doesn’t rely on financial incentive to increase retention. Instead, they focus on creating a culture of commitment and purpose, avoiding lay-offs during downturns, promoting from within, and investing in people.

![Fig. 2: The Long Term View of Family Business Performance](source: Harvard Business Review South Asia November 2012)

Though family run companies slightly lag their peer group when the economy boom, they weather recession for better.

**CONCLUSION**

Much becomes clear how coherent and synergistic automobile dealers lead their business, very much cost conscious, but always enjoys surplus funds to take the shock of lay-offs during recession times, always take calculative risk, thus improving retention. Fewer acquisitions mean again less debt. Money saved through frugality is invented wisely if the company keeps a high bar on capital expenditures.

If that trend continues, the resilience-focused strategy of the family-owned companies may become more attractive to all companies. In a global economy that seems to shift from crisis-to-crisis with alarming frequency accepting a lower return in good times to ensure survival in bad times may be a trade-off those managers are thrilled to make.
In any automobile industry, role played by the dealer is very much vital to make the presence of the product through end-customer. Through his initiation, he can bring the brand value from bottom to top and vice versa. It is so observed that because of the dealer's ability, social network, political and economical strengths, the products are being sold at higher numbers versus high brand value of the same segment competitors. Hence, selecting the right dealer is a vital role for any Managing Director of automotive manufacturer to sustain in the competitive environment.

In customer capitalization bridging the gap between customer, product and the brand by making customer happy and satisfied by addressing his concerns, dealer plays vital role.

Dealer can make or break the important link with the customer to automobile companies by capitalizing the customer and help in repeat sales.

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Determinants of Capital Structure in Indian Automobile Companies: A Case of Tata Motors

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Abstract—Firms use different sources of finance having independent characteristics to finance its operations and to succeed in attaining the ultimate goal of shareholders’ value creation. Every decision in business has inevitable connection with finance and cost of finance. Indian financial market has been changing swiftly from banking-dominated to capital market-oriented system. Finance manager has a variety of alternatives at his disposal to raise funds but associated with different cost. The raising of funds may not be a great challenge in a liberalized era but the ultimate objective is efficient use of funds and earning a rate of return over the cost of capital. This will depend upon the capital structure and achieving a judicious mix of debt and equity funds into the capital structure. Improper mix of debt and equity will lead to wealth destruction of the shareholders and optimum capital structure results in wealth creation. This paper has examined the determinants of capital structure in auto industry, particularly in Tata Motors. The period of the study is 12 years: from 2000 to 2011. Seven determinants of capital structure, namely; non-debt tax shields, size of the business, profitability, growth of assets, tangibility, interest coverage ratio and liquidity. It has been observed that non-debt tax shield, size of the business, growth of assets as significant factors in deciding capital structure.

Keywords: Capital structure, financial leverage, size of firm, growth of assets

INTRODUCTION

A business requires long term funds to purchase fixed assets like land, building, equipments and financing permanent working capital. A firm can make use of different sources of financing whose costs are different. Two important sources of finance:

- **Owners Fund**: Equity shares, retained earnings.
- **Debt**: Long term loan, debenture, fixed deposit.

While analyzing the importance of owners’ fund and debt, equity as source of finance has fewer obligations as compared to the later. Debt has fixed obligation with fixed rate of interest and definite tenure. These financial fixed charges do not vary with the level of EBIT or sales and they are incurred irrespective of profits available. While return to equity holders is affected by the magnitude of debt in the capital structure of the firm and its sales.
Corporate finance theory is built on the premise that primary goal of corporation should be to increase shareholders wealth. Earlier research in financial economics also indicates shareholders’ wealth maximization as ultimate goal on which all business decisions should rest. Shareholders’ wealth maximization as goal should also be seen in the context of collective social welfare. Jensen (2001) argues that firm’s wealth maximization would lead to maximization of society’s wealth as well. Use of fixed cost funds in the form of debt, as source of finance generates increased returns for the equity shareholders without an additional issue of equity. The employment of source of funds for which the firm has to pay a fixed cost, or fixed rate of return, may be termed as leverage. Employment of debt in the capital structure increases the risk associated with the business and return available to the shareholders. The objective of this paper is not whether capital structure decision enhances shareholders’ wealth or destroys, this study focuses on factors affecting capital structure decisions.

**LITERATURE REVIEW**

1. Inderjit Singh *et al.*, (2012) have studied the determinants of capital structure in Indian automobile industry during the period 2006–2010. The sample was selected in the study of 100 firms in auto sector which were listed on BSE. He used correlation and regression techniques for further exploration. Leverage was proxy for dependent variable and growth of asset, size, tangibility and profitability are other independent variables used in the study. The result shows that all variables are significant. Growth opportunities, firm size and tangibility are positively related with the leverage and negatively related with the profitability in the Indian automobile industry.

2. Vijaykumar (2011) has studied the relationship between firm structure and profitability on Indian automobile firms. He studied 20 Indian automobile firms during the period 1996–2009 by applying correlation and regression technique in investigating relationship. He finds out that size, growth in sales, liquidity, leverage and age has a significant relationship with the profitability.

3. Talat Afza *et al.*, (2011) have studied industry-specific attributes of firms in automobile, engineering, cables and electrical goods sectors affecting capital structure variables during the period 2003–2007. He selected a sample of 22 companies in automobile sector, 7 cable and electrical goods manufacturing companies and 8 engineering companies. For further investigation and analysis, he used
Spearman’s correlation and regression and concluded that tangibility, profitability, taxes, liquidity were having significant relation with leverage.

4. Rajan *et al.*, (1995) have studied capital structure and its determinants in G7 countries. They found that result is same in all sample countries and difference is due to bankruptcy and taxation laws. He found out that size, profitability, tangibility and growth are important determinants of capital structure.

**RESEARCH METHODOLOGY**

**Data Collection**

The proposed paper is a case study based secondary data which requires annual reports of Tata Motors Ltd. This has been obtained from Prowess database.

**Objectives of the Study**

1. To examine the determinants of capital structure in the auto industry, particularly in Tata motors.

**Scope and Limitations of the Study**

1. The study is restricted to Tata Motors Ltd. only.
2. Study period of 12 years, i.e. March 2000 to March 2011 is considered for analysis.
3. The study is based on seven determinants of a capital structure.

**Hypotheses**

This study has tested the following null hypotheses on relation between the defined variables and capital structure of Tata Motors.

- $H_{01}$: There is no significant relation between size and financial leverage.
- $H_{02}$: There is no significant relation between profitability and financial leverage.
- $H_{03}$: There is no significant relation between tangibility and financial leverage.
- $H_{04}$: There is no significant relation between Non-Debt Tax Shield and financial leverage.
**H05:** There is no significant relation between growth in asset and financial leverage.

**H06:** There is no significant relation between interest coverage ratio and financial leverage.

**H07:** There is no significant relation between liquidity and financial leverage.

**SPECIFICATION OF THE MODEL**

Following multiple regression model has been used to test the theoretical relation between the financial leverage and characteristics of the firm.

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 \]

**TABLE 1: DEFINITION OF VARIABLES**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Leverage (Fl)</td>
<td>Total Debt to Total Assets</td>
</tr>
<tr>
<td>Size of Firm (Size)</td>
<td>Log of Sales</td>
</tr>
<tr>
<td>Profitability (Profit)</td>
<td>Ebit to Total Asset</td>
</tr>
<tr>
<td>Tangibility (TG)</td>
<td>Fixed Asset to Total Asset</td>
</tr>
<tr>
<td>Non Debt Tax Shield (NDTS)</td>
<td>Depreciation to Total Asset</td>
</tr>
<tr>
<td>Growth of Asset (Growth)</td>
<td>Current Year Total Asset Minus Previous Year Total Asset to Previous Year's Total Asset</td>
</tr>
<tr>
<td>Interest Coverage Ratio (ICR)</td>
<td>Interest to EBIT</td>
</tr>
<tr>
<td>Liquidity (CR)</td>
<td>Current Asset to Current Liability</td>
</tr>
</tbody>
</table>

**RESULTS AND DISCUSSION**

The Spearman’s Correlation and multiple regression technique is used to understand the relationship between dependent and independent variable and ANOVA is used to assess overall significance of the model.

**TABLE 2: CORRELATION MATRIX**

<table>
<thead>
<tr>
<th></th>
<th>FL</th>
<th>Size</th>
<th>Profit</th>
<th>TG</th>
<th>NDTs</th>
<th>Growth</th>
<th>ICR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>-0.02</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit</td>
<td>-0.91</td>
<td>0.15</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TG</td>
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<td>-0.90</td>
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<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDTs</td>
<td>-0.26</td>
<td>-0.91</td>
<td>0.09</td>
<td>0.86</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td>-0.15</td>
<td>0.68</td>
<td>0.22</td>
<td>-0.87</td>
<td>-0.77</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICR</td>
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<td>0.45</td>
<td>0.88</td>
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<td>0.57</td>
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<tr>
<td>CR</td>
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<td>0.21</td>
<td>0.65</td>
<td>0.75</td>
<td>-0.54</td>
<td>-0.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Interpretation of Correlation Analysis

Correlation analysis is performed to assess association between variables, in order to verify the linear relationship between the variables. The correlation matrix shows that all variables have negative relationship with financial leverage except tangibility (+.20).

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.99</td>
<td>0.82</td>
<td>6.07</td>
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</tr>
<tr>
<td>Size</td>
<td>-0.15</td>
<td>0.03</td>
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<td>0.01</td>
</tr>
<tr>
<td>Profit</td>
<td>-0.62</td>
<td>0.39</td>
<td>-1.62</td>
<td>0.18</td>
</tr>
<tr>
<td>TG</td>
<td>-0.61</td>
<td>0.48</td>
<td>-1.28</td>
<td>0.27</td>
</tr>
<tr>
<td>NDTT</td>
<td>-12.63</td>
<td>2.71</td>
<td>-4.66</td>
<td>0.01</td>
</tr>
<tr>
<td>Growth</td>
<td>0.00</td>
<td>0.00</td>
<td>-4.51</td>
<td>0.01</td>
</tr>
<tr>
<td>ICR</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.86</td>
<td>0.44</td>
</tr>
<tr>
<td>CR</td>
<td>-0.06</td>
<td>0.07</td>
<td>-0.78</td>
<td>0.48</td>
</tr>
<tr>
<td>Multiple</td>
<td>R 0.99</td>
<td>R Square</td>
<td>F Value</td>
<td>ANOVA Significance</td>
</tr>
<tr>
<td></td>
<td>0.99</td>
<td>44.05</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Interpretation of Multiple Regression Analysis

The regression analysis is a technique to construct a statistical model which can be used to predict one variable by another variable. In regression model, the variable which is to be predicted is called dependent variable (financial leverage) and the variable which influences another variable is called independent variable (size of business, profitability, tangibility, non-debt tax shield, growth in asset, interest coverage ratio and current ratio). F-test is used to test overall significance of the model.

\[ R^2 \] value shows that 99% variation in financial leverage is explained by size of business, profitability, tangibility, non-debt tax shield, growth in asset, interest coverage ratio and current ratio. Table No. 03 shows estimated coefficients of all seven explanatory variables used in the model. F statistics and significance of ANOVA shows that overall model is significant. Out of seven explanatory variables, size of the business, non-debt tax shield and growth in the asset is found significant at 5%.

1. The result shows that size of the business have negative and significant relationship with financial leverage. Empirical argument put forward for such relationship is that large size firms are more diversified and highly profitable. Also larger firms disclose more information to outsiders or market and they have less information asymmetry problems. So, large size firm rely more on equity than debt.
2. The negative relationship between profitability and leverage indicates the presence of pecking order theory. Pecking order theory indicates that there is a hierarchy in financing, company first use internal generated funds, then debt and equity is used as a last resort. But this relationship is not statistically significant and hence null hypothesis is accepted.

3. Firms are likely to use debt over equity as interest provides tax shield. Depreciation also provides tax shields (non-debt tax shields) and can be substituted for debt tax shield. Table No. 3 shows non-debt tax shield negative sign and it implies that in the presence of non-debt tax shield firm avoids to use debt for tax shield. The correlation matrix indicates very strong and positive relationship between tangibility and non-debt tax shield. So, it is concluded that company relied more on non-debt tax shield over debt tax shield.

4. Although, growth is observed to be significant but regression coefficient has neither negative nor positive sign. Therefore, relation between growth in asset and financial leverage remains inconclusive. The reason for such relationship is that there is negative relationship between asset growth and tangibility (-0.87), non debt tax shield (-0.77) in correlation matrix. So, growth in asset is not due to fixed asset but by current asset.

CONCLUSION

In this study, an attempt has been made to find out the determinants of capital structure in Tata Motors. During the study, financial leverage used as a proxy for capital structure and seven independent variables were considered for the study:

On the basis of statistical results following null hypotheses stand rejected:

1. There is no relationship between financial leverage and size of the business.
2. There is no relationship between financial leverage and non-debt tax shield.
3. There is no relationship between financial leverage and growth of asset.
The study of capital structure of Tata Motors for last 12 years has provided some useful insights about its financing pattern. The model can be further extended for detailed study of capital structure existing in Indian automobile industry. Growth of automobile industry is one of the indicators of economic development of any country. As such, the proposed study may provide further meaningful insights.

REFERENCES


Book Review

**BLUE OCEAN STRATEGY: HOW TO CREATE UNCONTESTED MARKET SPACE AND MAKE COMPETITION IRRELEVANT**
Harvard Business School Press

**AUTHOR**
W. CHAN KIM, RENÉE MAUBORGNE
Edition: Illustrated
Publisher: Harvard Business Press, 2005
ISBN: 1591396190, 9781591396192
Length: 240 Pages

**BOOK REVIEWER**
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Most companies spend a large amount of time to gain and retain the same set of customers in the same market and thus compete with their competitors. This phenomenon is referred to as Red Oceans. Author Kim and Mauborgne state that over the past few decades many companies are in Red Ocean i.e. competing for the same market, the same set of customers which leads to cut throat competition among various industry players. But if companies really want to lead and get success in the market, they need to think beyond Red ocean. Instead of competing in the market, they should explore new opportunities i.e. they should look for Blue oceans. They should have new product offering or maybe an entirely new target market.

By moving into this “untapped market space” companies can find “opportunity for highly profitable growth.”Blue ocean strategy is when an organization breaks away from the conventional approach to facilitate the creation of new uncontested market space thereby making competition irrelevant.
To create a Blue Ocean strategy, organizations must be committed to value innovation. The authors stress that “value” and “innovation” must work together simultaneously in order to develop a Blue Ocean strategy.

Innovation without value involves technology-driven, market pioneering tactics that often lead to over engineered products your market isn’t willing to accept or pay for.

Value without innovation often leads to value creation on an incremental basis which usually is not enough for your organization to stand out in the crowd. A blue ocean strategy focuses on reducing costs and increasing buyer value (differentiation) at the same time.

To successfully utilize the blue ocean strategy methodology, you must first learn the tools. The primary tools are the Strategy Canvas, the Four Actions Framework-the Eliminate-Reduce-Raise-Create Grid, and the Three Characteristics of Good Strategy.

**STRATEGY CANVAS**

The x-axis represents the many factors organizations compete on (price, image, support, speed, etc.) and the y-axis illustrates where each company is positioned for each factor. By plotting your organization out against competitors you have a visual representation of where your strategies are in relation to competitors. Identical or similar strategy curves are a clear indication that everyone is trying to outdo the other on the same factors and no organization stands out from the crowd. At the same time, organizations are spending more and more money for competition’s sake and profits are eroding away.

**FOUR ACTIONS FRAMEWORK/ GRID**

- **Eliminate** factors that no longer add value for the customer; this will eliminate unnecessary costs.
- **Reduce** factors that were over designed or features that were added for the sake of competition; reduces unnecessary costs.
- **Raise** factors important to the customer that have been compromised; utilize some of the cost savings from the first two actions.
- **Create** factors that have never been offered (a new value proposition).

To create a blue ocean strategy one must change organization’s curve on the strategy canvas and move away from the competition. This can be accomplished using eliminate, reduce, raise, and create framework. It helps to break each section into four quadrants of a grid.
THREE CHARACTERISTICS OF GOOD STRATEGY

Focus, Divergence, and a Tagline: The new strategy FOCUSES on the important areas and not on every single factor, DIVERGES away from the competitors offerings, and has a simple easy to communicate TAGLINE.

The authors identify the following six principles necessary for blue ocean strategy formulation and execution.

BLUE OCEAN FORMULATION PRINCIPLES

RECONSTRUCTING MARKET BOUNDARIES

Market boundaries can be reconstructed by analyzing six paths: alternative industries, strategic groups within industries, the chain of buyers, complementary product and service offerings, functional and emotional appeal to buyers, and time (trends).

FOCUSING ON THE BIG PICTURE, NOT ON THE NUMBERS

Too often, organization’s fail to see the big picture because they are so overwhelmed with number crunching. The four steps to helping leadership focus on the big picture include:

- **Visual Awakening:** visualizing current strategy on a strategy canvas.
- **Visual Exploring:** going on field to explore the six paths stated above.
- **Visual Strategy Fair:** Taking the results from the visual exploration and drawing new alternative strategy canvases for group feedback, discussion, and observation; be sure to get feedback from different stakeholders and then build the best strategy.
- **Visual Communication:** Incorporating and distributing the before and after strategy canvas to your team; going forward, only approve projects and initiatives that will help make the new strategy canvas a reality.

REACHING BEYOND EXISTING DEMAND

It’s about thinking beyond existing customers. Determine the commonalities of three tiers of non customers and develop strategies to generate mass appeal:

- **First Tier:** soon to be customers who are waiting to jump ship for a better option; find out what that better option is that they are waiting for; look for commonalities.
Second Tier: individuals that refuse to use the product or service because the price or other features are unacceptable; learn more about why they refuse to use your product.

Third Tier: These are truly unchartered waters that competition typically ignores; what possibilities exist?

Getting the Strategic Sequence Right

To confirm a blue ocean idea, one should evaluate it against four criteria in the following sequential order:

- **Buyer Utility**: Determine if there is exceptional buyer utility (productivity, simplicity, convenience, risk, fun and image, and environmental friendliness) across the six stages of a buyer’s experience cycle:

- **Price**: Determine the strategic price that will generate the volume necessary for critical mass; price should not be based on the traditional cost plus approach but rather on customer value, form and function, and the ease at which your idea can be copied. The price calculation should be: (SP) strategic price-(PM) desired profit margin = targeted costs.

- **Cost**: Determine if one can design the product and/or service to meet the targeted cost. This will allow you to strategically create a profit and cost structure that is difficult to mimic. Achieving the targeted cost may mean streamlining, costs innovations, partnering or outsourcing, and price innovation (developing a new model).

- **Adoption**: Determine the adoption hurdles buyers will go through and address them up front.

If the idea passes through all these steps, you most likely have a blue ocean idea.

Overcome Key Organizational Hurdles

Use tipping point leadership to help people understand the need for change. This isn’t accomplished through anecdotal stories or force but instead by going out into the field and facing the realities. This includes talking to disgruntled customers and letting a team experience and appreciate the need for change.
To increase accountability and motivation, leadership should utilize the concepts of kingpins, fishbowl management, and atomization.

- **Kingpins**: Get the key influencers on board and behind the blue ocean strategy.
- **Fishbowl**: Make strategy progress reporting an open group process where peers are reporting in front of peers. Not many people enjoy explaining their inaction to a group of peers and colleagues.
- **Atomization**: Don’t overwhelm your team by dumping a large and seemingly unattainable strategy in their laps. Break it down into manageable chunks that are realistic and attainable.

It’s important to have a consigliere on blue ocean strategy team—someone who knows the playing field well and can identify and anticipate the resistors. This will allow taking preemptive action and keeping the resistors from sabotaging the blue ocean strategy.

Separate resistors into angels—who are in alignment and will gain the most by the strategic changes and devils—who are ready to dig in and battle against the initiative because they have the most to lose. Anticipate and be prepared to counter devil’s attempts to sabotage the plan with facts and reason.

**Building Execution into Strategy**

Like any strategic planning initiative, involve all stakeholders in the process early and often including front line staff—the ones who will most likely be implementing the plan.

Employees will champion the new strategy if the organization has done everything they can to ensure a fair process. A good way to ensure a fair process is to follow the three E’s—engagement, explanation, and clarity of expectation.

*Engage* your team as part of the planning process and hear them out. Make sure they know you have actively listened to their ideas and input. Be honest and sincere in your actions or you will not gain their trust and support. *Explain* to them why you have chosen the strategy you have chosen and state very clearly what the new *Expectations* will be. By using this approach, employees will feel respected and will be dedicated to fulfilling the expectations you have established—even if they do not agree with your final decision.
In this way, the authors take a fresh approach to the strategic planning process. Kim and Mauborgne do a great job keeping the concepts simple and providing diverse examples to adequately support their ideas As with all business concepts, the simpler they sound, the harder they are to implement. Blue ocean strategy is no different. It requires a paradigm shift away from the traditional way (Template) of conducting the strategic planning process.

**Interesting Quotes from the Book**

“The only way to beat the competition is to stop trying to beat the competition.”

“In red oceans, the industry boundaries are defined and accepted, and the competitive rules of the game are known. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set.”

“Instead of focusing on beating the competition, they focus on making the competition irrelevant by creating a leap in value for buyers and your company, thereby opening up new and uncontested market space.”

“Value innovation is based on the view that market boundaries and industry structure are not ‘given’ and can be reconstructed by the actions and beliefs of industry players.”

“To fundamentally shift the strategy canvas of an industry, you must begin by reorienting your strategic focus from competitors to alternatives, and from customers to non-customers of an industry.”
Author Index

Abhilasha, N., 140
Adhegaonkar, Vikas Ramesh, 182
Arif, Md. Zahir Uddin, 45
Chebolu, Radha Mohan, 152
Dangre, Rita, 189
Islam, Md. Tarikul, 45
Kaddi, B.I., 97
Kalshetti, Prashant, 119
Kulkarni, Kishore G., 11
Kulkarni, Praveen D., 174
Kulkarni, V.S., 97
Kumar, Navdeep, 134

Muktadir-Al-Mukit, Dewan, 45
Munda, Sneha Singh, 61
Rajan, D., 85
Savanoor, Sudarshan S., 119
Schmidt, Rachel, 11
Sharma, Eliza, 105
Sharma, Neha, 119
Singh, Anurag, 161
Strutz, Jessica, 69
Subrahmanian, Mu., 140
Uddin, Md. Momtaz, 45
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