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A Reconsideration of the Great Depression

Chee-Heong Quah and Patrick M Crowley***

The recent global financial and economic crisis has put the 1929-33 Great Depression back into the limelight. Looking at the Depression and today's domestic and international arrangements, some have opined that another recession as severe as the Depression is around the corner. Against this backdrop, this paper revisits the events leading to the Depression and discusses the most prominent arguments on the causes, including the Friedman-Schwartz hypothesis, the bank failures in 1920s, and the slump in the US consumption. The paper continues with a reconciliation of the theories, and finally, ends with an assessment of the possibility of a return of the Depression based on today's considerations. The authors assert that unless there is another disaster of catastrophic proportions, the world will likely be free of such an awful Depression in the 21st century.

INTRODUCTION

The US mortgage crisis which began in 2006 has put back the Great Depression (Depression thereafter) and the recent actions of the US Federal Reserve (Fed) in the limelight.

In a recent online article[1], two prominent economists have been making an ongoing comparison of the current economic downturn with the movement in key indicators during the Depression for the world economy and for individual economies. Their findings are that industrial production has tracked that of the 1930s for most countries, and if anything the current downturn appears to be worse, so far, than the downturn of the 1930s.

Logically though, if the current economic downturn is to mimic the Depression, the proximate causes of the Depression must, to a greater or lesser extent, exist now. In this sense, the theoretical underpinnings of the causes of the Depression are important, where their validity or otherwise now could act as a catalyst prompting a more widespread global downturn than we have experienced to date.

There have been many prominent theories on the causal factors of the Depression. One of the objectives of this paper is to recapitulate the much debated controversial theory by Friedman and Schwartz, which links the Fed with the

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1 *See* Eichengreen B and O'Rourke K (2009), "A Tale of Two Depressions", available at http://www.voxeu.org/index.php?q=node/3421

Depression (Bordo, 2003; Christiano *et al.*, 2003), and some foremost critiques against the theory. Other than the theory by Friedman and Schwartz, a review of other prominent theories is also presented.

There seems to be a void in the literature on the Depression. To a certain degree, many studies have concentrated on individual crises, but only a handful have discussed the possibility of another worldwide Depression based on today's domestic and international arrangements. Furthermore, these studies are rigorous and may be incomprehensible to business managers. Thus, this paper also intends to highlight, in basic terms, comparisons between today's arrangements and that of the Depression era to readers who are not rigorously trained in economics.

This paper begins with a brief review of the Depression, followed by the Friedman and Schwartz hypothesis, criticisms against the hypothesis, other theories surrounding the onset of the Depression, a reconciliation of the theories, and finally, ends with a discussion on the possibility of a return of Depression-like conditions in the 21st century.

THE GREAT DEPRESSION (1929-33)

The accounts of the Depression have been written by Gordon (1999) about the events leading to the New York Stock Exchange crash in October 1929 and the subsequent Depression. With a fall of 12.8% of the Dow Jones index on Monday, October 28, 1929, this crisis marked the sharpest fall in the index up until then and for another 30 years. The following brief account of the events of the Depression is extracted and summarized from Gordon (1999), Mishkin (2004) and Pugel (2004).

In 1928, President Coolidge was optimistic about the prospects for the American economy and the rapid rise in stock values at the New York Stock Exchange was being fueled by low interest rates and good investment prospects. Speculation played an important role as this was a largely unregulated market where bear raids [2] and short sales[3] were day-to-day operations. Hence, despite the belief that the episode was an anomalous misfortune that hit the US, the resulting boom of Wall Street was nothing but a speculative bubble. One thing was certain and it was that this crisis constituted the first one in which technology accelerated the rate of events and once the process started, it took only 3 days to erase $5 bn from the stock market.

In October 1929, the US stock market crashed as a result of the tight monetary policy of the Federal Reserve officials who viewed the booms of 1928 and 1929 during which stock prices had doubled, as excessive speculation. The crash led to a loss of one-third of the S banks, which coupled with plummeting sales in the agricultural sector that intensified adverse selection and moral hazard problems, led to a prolonged economic

[2] Bear strategy in which someone sells borrowed stock for which the seller will pay later for it in the hope that the price will fall.

[3] A group of sellers start selling short in order to push the price down and benefit from the price fall.

contraction in the US in which unemployment rose to 25% during several months of 1932-33. Even in 1940, the unemployment rate was still averaged 14.6%.

In the early 1930s, the financial community, which had become paranoid about bank deposits and currencies from the early postwar chaos, was ever more alarmed by the Wall Street collapse in the US. Worse still, the failure of the reputable Creditanstalt bank in Austria caused a run on German banks and mark, because Germany had been lending heavily to Austria. The panic soon spread to Britain where the pound sterling had been perennially weak. This was aggravated by Britain's heavy lending to the collapsing German government. Consequently, in 1931, Britain abandoned the gold monetary standard and let the pound devalue. In 1933-34, the US followed suit and let the dollar devalue against gold, partly because President Roosevelt wanted to manipulate the price of gold to create jobs. Correspondingly, other countries also used devaluations, tariffs, and other trade barriers to boost exports and domestic employment, but restricting imports, leading to beggar-thy-neighbor[4] policies that probably triggered worldwide Depression as a result of the shrinkage in the international trade.

The next section discusses the Friedman and Schwartz hypothesis, one of the most debatable hypotheses on the Depression in the US, and the critiques against this hypothesis.

THE FRIEDMAN AND SCHWARTZ HYPOTHESIS: DEPRESSION IN THE US

While Hayek (1933) and Rothbard (1963) agreed that the Fed had overinflated the money supply in the 1920s, which caused an artificial boom and the inevitable depression due to 'malinvestments', Friedman and Schwartz (1963), Ratner *et al.* (1979), and monetarists generally viewed the Depression not as a basic flaw in American capitalism but attributed the contraction to a collapse in money supply. Their hypothesis suggested that this was initially triggered by tight federal policy in 1928-29 to stem the stock market boom. Indeed, the present Federal Reserve Chairman Ben Bernanke has admitted that the Depression was caused by monetary contraction, which was the consequence of poor policy making.[5]

The bank panics and failures were therefore a consequence of short-term growth fueled by cheap credit in the 1920s (Bernanke, 2000). In total, 9,000 banks had failed in the 1930s. When demand fell, debtors defaulted while feared depositors began massive withdrawals. This was aggravated by the American Smoot-Hawley Tariff Act which substantially reduced exports because of 'tit-for-tat' tariffs and quotas placed on the US imports by other countries. The average ad valorem rate of duties on dutiable imports for 1921-25 was 25.9% but under the new tariff it jumped to 50% in 1931-35. Panic alleviators such as government guarantees and Federal

4 The term was originally devised to characterize policies of trying to cure domestic depression and unemployment by shifting effective demand away from imports onto domestically produced goods, either through tariffs and quotas on imports, or by competitive devaluation.

5 *See* http://www.worldnetdaily.com/index.php?fa=PAGE.view&pageId=59405

Reserve Banking regulations were ineffective or not used at this time. In the face of worsening future prospects, the surviving banks built up their capital reserves and made fewer loans, which intensified a deflationary vicious cycle (Cagan, 1965).

Pertaining to the rising capital reserves, Friedman and Schwartz (1963) put most of the blame on the Fed's action which led to substantial and sustained falls in banks' deposit-reserve and deposit-currency ratios. The rise in discount rates in 1929 to curb the overheating was deemed too late which only hastened the stock market crash and pushed the economy into recession. As pointed out by Krugman in Jia (2008) on the recent US mortgage crisis, the Fed should have acted in boom rather than in the slump since the Fed has substantial regulatory and moral-suasion power.

Bank reserves were initially restrained by the Fed, which discouraged banks to lend. As a result, high-powered money[6] fell in the second quarter of 1929 and in the first three quarters of 1930. This denied the legitimate fund-seekers the funds they needed. Accumulation of bank reserves by banks fearful of lending in a contracting economy also exacerbated the situation. Though high-powered money started to increase from 1930-32, the money supply was still actually falling, as the money multiplier dropped due to a reduction in productivity.[7]

On the initial reduction of money supply and the subsequent bank runs, Friedman and Schwartz (1963) argued that this would not have happened had the Fed undertaken appropriate and timely counter-cyclical policies by supplying more high-powered money through larger open market purchases when the market needed liquidity the most. Hence, the demand for money could have been met and failures of bad banks would have only affected the depositors and stockholders of these banks; thus a systemic downfall could be avoided. It was postulated that the Fed did not act because falling banks were disproportionately small non-member banks while the failures of large member banks were perceived to be attributed to bad management.

This issue was raised because in the earlier recessions of 1924 and 1927, the Fed had used counter-cyclical open market operations that resulted in a shortening of these recessions, but the death in 1928 of Benjamin Strong, the governor of the Federal Reserve Bank of New York who played the *de facto* leadership role, had resulted in a lack of clear leadership. George Harrison, who succeeded Strong, could not exercise the leadership required.

In short, the Friedman and Schwartz hypothesis claimed that the incompetencies and complacencies of the Fed should be blamed for the outbreak of the Depression.

[6] High-Powered Money = Reserves held by Banks + Currency in Circulation held by the Public.

[7] *See* Mishkin (2004: p. 375), where $M = m \times MB$ is the money supply, m is the money multiplier and MB or monetary base is the currency in circulation plus reserves. Monetary base is also known as high-powered money. M can fall when the increase in MB is more than offset by a decrease in m.

Critiques Against the Friedman-Schwartz Hypothesis

Mayhew (1983) argued that the blame for monetary contraction on the Fed was exaggerated. Friedman and Schwartz's (1963) argument would have been much stronger had the high-powered money decreased consistently during the critical years of 1929-1933. However, after its initial reduction from the second quarter of 1929 till the third quarter of 1930, high-powered money had instead increased throughout 1931, 1932 and most of 1933, albeit by small amounts. Therefore, he argued that if indeed the Fed had restrained credits, it was only from the second quarter of 1929 till the third quarter of 1930, but not beyond.

And, in refuting the monetarist's notion that the Fed was inept, Mayhew (1983) contended that the power of Fed was constrained as it was not an organization to which all state and national banks belonged. Moreover, in those days of largely unfettered capitalism, banks had failed in large numbers (exceeded 350 every year between 1920 and 1929) without widespread recessions. Therefore, the Fed might not have expected the situation to have been any different in 1930. In further defense of the Fed, Mayhew maintained that the Fed had followed adequate guidelines when making open market purchases. Throughout the 1920s, the Fed had used the reserve status of the New York and Chicago banks to evaluate the banking system position as a whole. Based on these two groups of banks' status, the Fed had achieved the goal of monetary easing by 1930-31. As remarked by Governor Harrison (Stauffer, 1981), "More liquidity would be worse, at the time when the banks lacked confidence because it would send a bad signal to them. Thus, how could Friedman and his followers be so sure that more reserves would entice frightened banks to lend and the public in general to borrow?"

On why the timely counter-cyclical open market operations were done by the Fed in the 1920s but not in the crisis period, Wicker (1966) speculated that in 1924 and 1927, international rather than domestic considerations dictated the timing of open purchases. It was claimed that the actions were undertaken to ease pressures on London as the banks there were struggling to return to prewar gold standard. Wicker thought that the easing of US money supply in 1924 and 1927 was not due to domestic recessions but rather conformity to England's call to return to gold after World War I. In other words, the Fed had no prior experience dealing with a situation as severe as the Depression. Furthermore, laws which required partial gold backing of credit, too, had imposed restrictions on the credit that the Fed could issue (Ellis and Silvano, 1999).

On the blame apportioned to the fall of the deposit-reserve and deposit-currency ratios, Temin (1976) pointed out that bank failures resulting from falling deposit-currency ratios can be explained by falling agricultural prices, the structure of American banking or poor bank management. Thus, he argued that income and production fell after 1929 for nonmonetary reasons which in turn reduced the demand for checkable deposits. While checkable deposits were reduced, money in cash or equivalent would be held more even without the initial contractionary monetary policy by the Fed in 1929. Temin (1976) explained that if money supply was endogenous, then the fall in checkable deposits could be explained by decreased demand for loans by business with new and underutilized factories, farmers who were beset by falling agricultural prices and consumers who were worried about continued employment. Therefore, the Fed's policy could not be blamed for the fall of deposit-reserve and deposit-currency ratios, and lack of counter-cyclical fiscal policy should be blamed instead.

In sum, the critics contended that various exogeneities governed the outbreak of the Depression rather than the policy of the Fed, which was implemented with due diligence.

BANK FAILURES IN THE 1920s

Though the Friedman and Schwartz hypothesis attributes much of the blame on the Fed as the institution that turned a mild recession into a deep one, the assertion that the Depression hinges on the spate of bank failures is indisputable. It is therefore worth discussing the possible factors which led to the extensive bank failures during the crisis period.

Stauffer (1981) found significant relationships between past bank failures and bank failures during the Depression on a state-by-state basis using single year bank failures rates for 1928-29 and 1930-31.[8] Stauffer conjectured a process which contributed to short run trends in bank failures; bad management and customer distrust might take their toll for a few years, which then instilled caution on the part of management and survival of the stronger banks which allowed the failure rate to recede for some time, but only to be followed by increasing problems as new banks arrived and old lessons were forgotten. Stauffer also found that the incidence of bank failures was higher in the agricultural states for the entire period from 1927 to 1933. Besides these banks, non-member banks had also experienced high failure rates in the late 1920s till the early 1930s.

In this respect, Stauffer (1981) postulated that the rural banking structure, namely the prevalence of small banks and non-member banks that were more prone to poor management, lower banking standards, depositor mistrust and inadequate liquidity, was a contributing factor as well. Using Spearman correlation coefficients based on 1929-31 data, Stauffer showed that bank structure was a significant determinant of bank failures while farm income was statistically insignificant. Stauffer's result was consistent with Cagan's (1965) observation that business conditions generally had little impact on bank failures in the early stages of a downturn.

Stauffer also cited other possible institutional causes of bank failures such as the lack of deposit insurance, rumor and panic and the failure of the Fed. Hence, Stauffer's proposition is compatible with Friedman and Schwartz hypothesis but casts a wider net.

8 On the other hand, Fleisig (1976) could not find significant relationships between past bank failures and bank failures during the Great Depression.

THE SLUMP IN US CONSUMPTION EXPENDITURES

Temin (1976) proposed the "spending hypothesis" to explain the Depression. According to Temin, Americans had been increasing their indebtedness throughout the 1920s with particularly heavy borrowings in 1929, thus, when the stock market crash came, the net wealth of households was severely reduced and the leverage level increased. This hypothesis is parallel with what Krugman explained in Jia (2008) where he predicted that the recent US mortgage crisis could produce 20 million Americans with negative equity.

The decline in the value of their assets both reduced their net wealth and raised the ratio of debts to assets. Consumer expenditures are related to the balance-sheet position of households, in which the stock of money figures only marginally. In addition, the costs of selling illiquid assets or going bankrupt makes household spending a function of leverage. At the same level of net wealth, consumption expenditures will be inversely related to the volume of debt. The slump in expenditures which arose from increased debt and lower net worth was therefore also a contributing factor to the Depression.

Temin's (1976) argument supports the critiques against the Friedman and Schwartz hypothesis, which basically state that factors uncontrollable by the Fed had caused the Depression.

VARIOUS EXOGENOUS FACTORS

Contrary to the monetarists who emphasized that the Fed's action had turned a mild recession into a depression, Mayhew (1983) listed a variety of problems that had developed in the 1920s and early 1930s that contributed to the Depression: the collapse of agricultural prices, England's attempt to return to the prewar gold standard, reparations and war debts[9], restraints on international trade, the end of the housing boom, and the maturation of the US automobile industry, among others. Meanwhile, Temin (1976) ascribed the decline in the housing market and the stock exchange in the late 1920s, particularly the New York Stock Exchange, along with the instability of the foreign exchange markets, large shifts in international lending and changes in terms of trade in the early 1930s as primary causes of the Depression.

In conclusion, as to what had contributed to the Depression in the US, perhaps, Gandolfi and Lothian (1977) were right when they suggested investigating the interrelationships between the real and monetary factors, instead of using just one of them when assessing the factors associating with the Depression.

THE FRIEDMAN-SCHWARTZ HYPOTHESIS: THE TRANSMISSION OF DEPRESSION TO THE REST OF THE WORLD

Friedman and Schwartz (1963), using evidence from August 1929 to August

[9] It is possible that without the large short-term international debt amassed by German banks in the process of rolling over the war-related debts, the German banking system would have withstood the failure of the Austrian Kreditanstalt (Fleisig, 1976).

1931, indicated that the US transmitted the Depression to the rest of the world by draining reserves away from them. The Fed raised interest rates in August 1929, which led to money stock contractions in the rest of the world. In addition, the transmission of the Depression was aggravated when the US deviated from the 'gold standard rules' by more than 100% sterilization of gold flows, causing the domestic monetary base not to increase as much as otherwise would have, further draining reserves from other deficit countries. Sterilization is the process by which the money supply is kept constant regardless of the inflow of gold; ordinarily, under the international gold exchange standard in force at that time, the gold flow into the US would have caused monetization which would raise US prices and make Britain more competitive as its prices fell.

In the 1920s, the Fed began to do open-market operations, even though these were not contemplated by the original enabling legislation (Formaini, 2005). And these early open-market operations were undertaken, unfortunately, to 'sterilize' gold inflows from England's over-valuation of its pound sterling. One factor of the over-valuation was England's financing of the world war. The US and France prevented the rise in US prices from occurring. Both nations' gold stocks rose dramatically while, at the same time, their central banks sold securities to reduce the monetary impact of the new gold to zero.

As a result, during the late 1920s, the US should have experienced inflation due to this gold inflow; but instead, it experienced a mild deflation due to the sterilization policy. Therefore, it is postulated that the US deflated the money supply in the rest of the world, and thus, transmitted the Depression to them.

Transmission of Depression to the Rest of the World: Critiques Against the Friedman-Schwartz Hypothesis

Friedman and Schwartz's argument on the transmission of the Depression to the rest of the world was rebutted by Fremling (1985) by saying that their proposition focused only on the situation in the US but ignored the situation in the rest of the world. Gold flows to the US did not necessarily imply falling gold reserves elsewhere, since mining of gold as well as conversion from private gold stocks could have increased total world reserves. According to Fremling, the gold reserves in the rest of the world had in fact increased during the first two years of the Depression, which was contradictory to Friedman-Schwartz's argument. Fremling also showed that, even with a reduction in total foreign reserve assets owned by the rest of the world, the rise in their gold reserves was about double, thus their net reserves were actually increasing rather than decreasing. In parallel with Fremling, using the Fed data, Hardy (1936) revealed that between December 1929 and December 1931, the US share of world gold had instead declined from 37.8 to 35.9%. Therefore, these arguments undermine Friedman-Schwartz hypothesis which says that the US had siphoned out gold reserves from the rest of the world.

Fremling (1985) also refuted the accusation that the US had violated the gold standard rules. At that time, reliable currency data were available but credit data were sketchy for most nations, so Fremling argued that currency data should be evaluated instead of M1 (money in circulation, demand deposits, and other checkable deposits). If currency data is used, the US sterilization was not as high as that of the rest of the world. To further support his point, Fremling showed that although US had a series of trade surpluses from 1919 to 1931, its surplus was actually decreasing from 1929 to 1931, thus it could not have generated a downswing in the rest of the world.

In short, based on the arguments above, it can be concluded that the US had not caused a massive shrinkage of money supply in the rest of the world, and therefore, did not transmit the Depression to the rest of the world through these means.

A RECONCILIATION

If Friedman and Schwartz (1963) and the monetarists are right, then the Fed transformed a 'mild' recession into a prolonged and severe Depression. It was the Fed's delayed tight monetary policy which aggravated the stock market crash when enormous speculation had already taken place. Though the stock market crash was something perceived to be imminent irrespective of the Fed's action, its severe impact and the outburst of fear could have been assuaged if the Fed had provided ample liquidity to the banks.

Liquidity was essential because with weakness in the agricultural sector, together with tight money, and numerous adverse events going on, a contagion of fear actually erupted, and subsequently, led to massive bank withdrawals. Bank withdrawals might not have happened if the general public knew that the Fed was going to supply banks with more credits after the stock market crash since banks suffered a great deal of bad debts when debtors were unable to repay.

Nonetheless, the Fed let banks collapse one after another as it was ignorant of the greater impact the bank collapse would trigger. If the Fed had not restrained credit, borrowers with legitimate needs (not speculative) would have been able to obtain continued credit, and thus, alleviate the downturn partly caused by a fall in the agricultural sector. Besides, if the agricultural sector were able to obtain credit easily, it might have been able to go through the transitory fall in prices and the contagion would not have arisen. It was also assumed that the recession would be a more temperate and a shorter one if the Fed had restrained credit at an earlier time in the market boom or eased credit right after the bubble crashed. Though credit was eventually eased by 1930-31, it was probably too late as massive bank failures had already transpired.

Alternatively, if Temin (1976), Mayhew (1983) and other non-monetarists were right, then the Fed had actually been innocent and had in fact done the right thing—irrespective of its action or inaction, the Depression would still materialize since the situation in 1929 was radically different from the recessions in the 1920s. Various unfavorable domestic and international events were taking place, and even with a lax monetary policy by the Fed, the fear would have overwhelmed any reassuring measures and eventually massive withdrawals would have still happened.

In sum, it may be reasonable that the Fed shoulders part of the blame for the onset of the Depression since various exogenous factors (some are nonmonetary) as mentioned previously could easily have emasculated the intervention by the Fed. In fact, the current literature has focused on these exogenous factors with advanced quantitative methods to look at the significance of the Fed's actions in the Depression. Among them are Bernanke (2000), Bordo (2003), Christiano *et al.* (2003), and Formaini (2005). These studies complemented the arguments discussed earlier by using sophisticated techniques to analyze the impact of different policy measures. The results in general do not reject the earlier propositions.

As to the question of whether the US transmitted the Depression to the rest of the world, the answer is more ambiguous as external and internal factors had come into play at that time. Perhaps World War I is the unquestionable culprit in this case, due to the large reparation payments that were required of the axis powers. Nonetheless, the ambiguity of whom or what is at fault does not detract from the following discussion on the impossibility of another Depression in the 21st century.

ASSESSING THE POSSIBILITY OF ANOTHER DEPRESSION

After reflecting on some of the significant, but certainly not exhaustive literature on the Depression, we would like to weigh up the possibility of an episode of a similar or a greater version of the Depression, considering the various developments and changes since then. The discussion here encompasses both economic and financial considerations, as well as political, social, and technological considerations.

ECONOMIC AND FINANCIAL CONSIDERATIONS

Since the stock market crash was a prominent factor in the Depression, we should assess the likelihood of a similar crash as eventful as the October 1929 crash. It is generally accepted that the crash or any other major stock market crashes were by and large outcomes of speculative bubbles. To curb the speculation, it is agreed that short-selling and capital lending should be controlled and monitored. From the lessons learnt from stock market panics in 1819, 1873, 1884, 1893, 1896, 1901, 1907, Black Friday (1869), Black Monday (1987), the downturn of 2001-02 and certainly the Wall Street Crash of 1929, the US or any other respectable monetary authorities should have ample foresight if a crash is forthcoming (see Dickinson, 2003). Benjamin Graham (Can Crashes be Forecasted?, 2006) discovered some signs that may lead to a stock market crash: people of average means become exceptionally wealthy, news media become overly euphoric, and inflation is rampant. In Asia, Chen (1999) found that the price behavior of shares and convertible bonds give a clear signal of market reversal in the 1997 financial crisis.

Besides the advantage of foresight, the technical aspects of stock market transactions have also been improved (Little, 2008). Margin requirements are much tighter now and not every investor or every stock is eligible for a margin account. The market will halt trading for an hour if the Dow drops 10% before 2 p.m. Trading will halt for two hours if there is a 20% drop in the Dow before 2 p.m. If the Dow drops 30%, trading is halted for the day. Significant events, such as the tragedy of September 11, 2001 may be a cause for not opening the markets at all or closing them early to prevent a panic. Also, a circuit breaker system was implemented, which electronically stops stocks from trading if prices plummet too quickly (Black Monday, 2006), which complements the employment of price limits (Chang, 2006).

The emergence of international portfolio diversification in the last two decades of the 20th century could in certain ways temper any major stock market crash in any single economy (Heston and Rouwenhorst, 1994). Though interrelated, the asymmetries in economic fundamentals, industrial structure, and competitive advantage across the nations in the Western hemisphere, the Middle East and the Far East of Asia should also reduce the likelihood or the intensity of a worldwide recession. For instance, as the US stock market deteriorated in the 2000-02 period, international diversification, despite the presence of substantial country risk, would have saved many portfolios from massive losses or from a total calamity altogether (Khoury, 2003).

On the likelihood of bank failures, capital overlending can be curbed in many ways. The risks of imprudent lending have been widely discussed in the context of the outbreaks of financial crises throughout the 19th and 20th centuries, be it domestic or international (see e.g., Krugman, 1999; and Yeyati, 1999). Therefore, banks over the world should have shielded themselves with sufficient precautionary tools and foreknowledge in preventing overlending and bank panics. For example, at the US federal level, anti-predatory lending bills have been introduced in Congress, such as the Predatory Lending Consumer Protection Act of 2000, and Anti-Predatory Lending Act of 2000 (Perrow, 2000). In fact, stockholders evidently perceived a general decrease in the risk of the banking industry as a result of International Lending Supervision Act (Billingsley and Lamy, 1988).

Besides the concern of stock market crash and bank failures in individual countries, the widespread nature of the Depression was partially attributed to the beggar-thy-neighbor policies by the policymakers back then. But today, increasing international interrelatedness in real and capital markets means that the much higher probability of the adverse impacts of 'beggar-thy-neighbor' policies is well understood, and therefore, no rational nation will adopt these types of policies. In fact, this is one of the reasons for the formation of the International Monetary Fund (IMF) and its sister, the World Bank, to mitigate the vicious cycle of beggar-thy-neighbor policies (Feldstein, 1998; and Stiglitz, 2002). The measures in place which act against beggar-thy-neighbor policies and subsequent widespread panic is also strengthened with regional economic integration that enhances the likelihood of the rescue of troubled member countries. A good example is the IMF and European Union's efforts to assist the Baltic states who have been badly hit in the recent global recession. Among the successful regional integrations are the European Union (EU), the North American Free Trade Area (NAFTA) and to a certain extent, Mercosur. In Asia, the recent change in the leadership of Taiwan, which promises more economic ties with China, suggests that the regional economy is also becoming more integrated (Callick, 2008).

On concerns of international chaos triggered by a single country, the US, from downward pressures on the dollar caused by substantial US current account and balance of payments deficits over the last two decades, there are at least two arguments that can mitigate the fear. The first is the sustainability of the dollar's value. As mentioned by McKinnon and Schnabl (2004), the dollar value today is sustainable as the rest of the world has been holding a large portion of dollar assets, and thus, would not allow the dollar's value to plummet. Back in the 1930s, cross-national holding of assets was restricted, which might have led to more selfish beggar-thy-neighbor policies where every nation raced to devalue its currency to enhance its competitiveness. Secondly, with the economic power shifts from the West to East Asia (i.e., China and India), the world has reduced its reliance on the US and the West for its input and output markets (Casetti, 2003), hence a global recession triggered by a single country or region today is more unlikely than at the time of the Depression. Since 2000, China has more than doubled its share in world merchandise exports and ranks as the third largest exporter and importer in merchandise trade in 2006, and in the second half of 2006, China's merchandise exports exceeded those of the US for the first time (World Trade Organization, 2007). As with the conventional wisdom of a competitive market, more dispersed economic power may make people better off, increasing economic welfare.

To summarize the economic and financial considerations outlined above: due to foreknowledge of a stock market crash, technical control against excessive stock market price movement, international portfolio diversification, measures against overlending, economic cooperation and regional integration, sustainability of the dollar value and more dispersed economic power globally, it is much less likely that a major Depression occur again.

POLITICAL, SOCIAL, AND TECHNOLOGICAL CONSIDERATIONS

Besides the economic and financial considerations, the role played by political, social and technological considerations cannot be ignored when assessing the possibility of another Depression.

The good news is that a global war is unlikely in the 21st century—although we have had the September 11, tragedy, intermittent terrorist threats across the Western hemisphere, junta strikes, ceaseless tensions in Middle East and suspicious nuclear endeavors in Iran and North Korea, among others, so it is perhaps uncontroversial to say that an international war as deadly as a World War will not occur at least in the foreseeable future (see Mandelbaum, 2002). And, this can in part be attributed to increasing worldwide economic integration (Momani, 2007). Thus, socially, a general sense of peace and stability is developed and reinforced even though many countries still loathe the hegemonic nature of the US's foreign policies as well as those of its close ally, Britain. Unless a world crisis triggered by, say, climatic catastrophes from global warming, food shortage, or an extraterrestrial intrusion, a universal world peace will likely prevail (Chao, 1995). This is very dissimilar to the circumstances prior to the outbreak of the Depression where the people were still deeply traumatized by the World War I. Given that another World War will not erupt, the problems brought about by war debts and reparations after World War I should not arise.

Besides a world relatively free of wars, education plays an important role too. With years of education in economics and finance, together with exposure from the media, baby boomers, and later generations are much more acutely aware of how the financial and banking systems function, and thus are presumably able to cope with more risks and uncertainties than the generation of the Depression era (see Saunders, 1970). It has been found that participation in college level personal finance courses was associated with higher levels of investment knowledge, while experience with financial instruments appears to explain the variance in both investment knowledge and savings rates (Peng *et al*., 2007).

Lastly, with tremendous advancement in information and communication technology, and in particular the widespread usage and access to the internet, it is becoming harder for private information to remain private, and therefore information asymmetries are being greatly reduced. With greater transparencies and information dissemination efficiencies, stock markets become more efficient, thus, abrupt market shocks can be significantly moderated (see Welfens, 2005). On the contrary, information took much more time and efforts to disseminate in the interwar period.

A general sense of world peace, a more finance-savvy generation, and the mushrooming of information technology may imply a more moderated financial economy worldwide than during the Depression era, thus reducing the likelihood of the reoccurrence of a Depression.

DISCUSSION

The business cycle is clearly a 'stylized fact' whose underlying cause has not been determined by economists. These cycles seem to occur with recessions on an irregular basis every 3 to 9 years. There are some economists (such as Milton Friedman) who believe that an accumulation of 'shocks' leads to these downturns in the economy, while other economists believe that there are underlying cycles (mostly in credit markets) that naturally lead to these cycles occurring. Economists do know though that there are four types of recession—(1) Originated in the housing market; (2) Originated in the stock market; (3) Originated in the financial sector; and (4) Originated in other parts of the economy, such as because of commodity price changes or the demise of a key sector in the economy. Usually the latter also prompts an exchange rate crisis as well, if experienced by developing countries. If more than one of these factors is at work, the recessions are usually more severe and last longer, with a slower recovery.

In a Depression, there are nearly always more than one factor at work that has caused the downturn—for the Depression they were the stock market, the housing market, and the financial sector. Clearly the more factors that are involved in the economic downturn, the more robust the policy response needs to be to offset the contractionary effects on the economy. In the Depression, the policy response was not robust, but in the current downturn the US response, at least, has been relatively robust and almost immediate.

Another factor is at play though as well—in terms of economics, our knowledge of how the macroeconomy operates has improved considerably since the early 20th century, and through trial and error, as well as experience, our understanding of how government policy changes impact the macroeconomy has improved greatly over the years. So better policies are now likely to be enacted in the face of a downturn compared with the last century. Politics though does play a role here, as the example of Japan demonstrates, with a non-robust policy response to the downturn there in the 1990s leading to what has been referred to as "the lost decade" of growth for this country.

The other factors that we referred to above, such as education, the international response to the downturn and the role of public information through the internet also now likely play an important role. They will likely help to ameliorate the negative effects of a recession, and prevent a Depression occurring. Recessions are certainly not a thing of the past, but in all likelihood a Depression is.

Once the current downturn is over, future researchers would have the advantage of another empirical case in which comparison and/or confirmation could be made.

CONCLUSION

This paper does not intend to assess in detail the various factors impinging on the likelihood of another Depression and unquestionably the factors evaluated above are not exhaustive. Nevertheless, the knowledge gained by economists from studying the Depression of the 1930s makes it less likely that the mistakes committed then will be repeated today. Indeed, although the current recession might have appeared to have started with an economic downturn that appears to be more precipitous than that of the 1930s, it is unlikely to continue on the same path for reasons outlined in this article. It is noteworthy that in the current economic downturn, the US has employed all possible policy measures to counter the downturn—fiscal, monetary and international measures—which demonstrates that although this article has outlined the theories behind the Depression of the 1930s, economic policymakers have been agnostic when deciding how to act. It is hoped that businesspersons and non-economics academics can benefit from reading this article; adding to their knowledge pool regarding the world's greatest Depression, the theories behind its outbreak, current economical, financial, political, social, and technological arrangements, and a straightforward comparison between these arrangements of the 21st century and that of the Depression era. Looking at the current developments, we assert that unless there is another world war, or other major world disaster of catastrophic proportions, the world will likely be free of such an awful Depression in the 21st century.

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The Role of Local Entrepreneurship and Multinational Firms in the Growth of IT Sector: An Exploratory Study of Bangalore[ψ]

*K Kumar**

This paper analyzes the growth of IT sector in Bangalore, both in terms of number of firms and employment accounted for by them. Differences in the patterns of growth were observed along the dimensions of ownership and the nature of activity carried out by the firms. While growth in number of firms were predominantly driven by the local entrepreneurs and Non-Resident Indian (NRI) entrepreneurs, the growth in employment was driven by the subsidiaries and joint ventures of multinational firms, and that too through expansions rather than new firm formation. These findings have implications for policy making, with respect to the role of multinational firms and the local entrepreneurship in the growth of an emerging industry.

INTRODUCTION

Bangalore, a metropolitan city in the Southern part of India, has attracted global attention in the recent years due to the rapid strides it has made over the last two decades in terms of its growth, fuelled to a great extent by the burgeoning Information Technology (IT) industry. Stakeholders in the IT industry—be it the leading industry players, technically qualified skilled workforce, customers or investors—have been alert to the opportunities offered by this emerging IT city. Academics and policy makers strived to understand the reasons behind the successful growth of Bangalore's IT industry (Saxenian, 2001). Recent evidence seems to suggest that the businesses in Bangalore start small and remain small and formidable barriers to growth exist for Bangalore's businesses (Bhide, 2004). However, unlike the non-IT sector, the IT sector appeared to have overcome the barriers that held back the growth of Bangalore's businesses (Kumar, 2007a). This entrepreneurial efforts at the micro level that enabled the IT sector to achieve break away growth in a low growth environment needs to be better understood to inform policy making

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that seeks to replicate this success in other locations and other sectors.

This paper seeks to explore the growth of IT sector in Bangalore from an entrepreneurship perspective and focuses on new firm formation and employment growth in the IT sector in Bangalore. The paper first sets out the theoretical and conceptual framework and the research questions that this paper seeks to answer. This is followed by an explanation of the data sources and the process of data collection. The paper then presents the analysis of the birth and growth of IT firms in terms of their ownership and activities carried out by them. The findings are then summarized, highlighting the observed patterns in entrepreneurship in the IT sector. Based on the findings, the paper then discusses the policy implications, particularly with reference to entrepreneurship and the role of multinational corporations. The conclusions and directions for future research are then presented in the final part of the paper.

ENTREPRENEURSHIP AND THE IT SECTOR: A REVIEW OF LITERATURE

THE IMPORTANCE OF THE IT SECTOR IN THE LARGER ECONOMIC CONTEXT

The importance of IT sector and its growth in contemporary economies has been highlighted in the literature. Acs and Szerb (2007) point out the role of IT revolution to the acceleration in the productivity growth in the US economy in the last decade. While recognizing that high-tech, high-growth clusters in India, China, Taiwan, Ireland and Israel are powering economic growth far beyond their home country, they note that these clusters are not all alike. Some clusters are playing leadership role in developing new products and services, while some others are hosting firms that have become crucial link within a global supply chain. Some clusters are seen to be doing both. Bangalore's IT industry could be considered as one such cluster, as discussed later in this paper.

The emergence of IT sector in India, measured in terms of revenue generated, had caught the attention of the world (Table 1). Prior studies on the Indian IT sector have been predominantly at the macro level, taking the nation (India) and the (IT) industry as the unit of analysis. Studies have focused on summary assessment of the industry in terms of its past and future (Arora *et al.*, 2001), explaining the reasons behind the growth of India's IT industry and assessing the impact of the IT industry's growth on the economy as a whole (Kumar, 2001). The reasons advanced for the emergence and early growth of industry include availability of low cost skilled manpower, and a combination of benign neglect and active support from the government (Arora *et al.*, 2001; Kumar, 2001; and Parthasarathy, 2004). The subsequent progression and sustenance of growth have been attributed to the role of transnational corporations (Patibandla and Peterson, 2002) and the building up of organizational capabilities (Athreye, 2003 and 2005). The regional and clustering phenomenon, strongly

Table 1: Software Exports of India

Year	Size (Rs. in cr)	Size ($ in mn)
1990-91	250	128
1991-92	430	164
1992-93	675	225
1993-94	1,020	330
1994-95	1,535	485
1995-96	2,520	734
1996-97	3,900	1,085
1997-98	6,530	1,750
1998-99	10,940	2,650
1999-00	17,150	4,000
2000-01	28,350	6,217
2001-02	36,500	7,647
2002-03	46,100	9,545

Source: NASSCOM Annual Reports

associated with the emergence of the IT industry and its growth has also received considerable attention, often with a focus on Bangalore, even comparing it with the silicon valley (Saxenian, 2001; and Basant, 2006).

ENTREPRENEURSHIP IN THE IT SECTOR

While the institutional and socio-economic factors have attracted adequate attention in explaining the Bangalore phenomenon, firm level entrepreneurial efforts have not received due attention in understanding the emergence of Bangalore's IT sector. Notwithstanding the strong growth performance of the industry as a whole, small and medium firms within the industry, normally associated with the autonomous entrepreneurs, experienced formidable difficulties in achieving growth (Kumar, 2003a and 2003b). At the global level, it is considered that the IT revolution had been spearheaded largely by the entrepreneurial companies (Acs and Szerb, 2007). Whether Bangalore's ITsector grew primarily due to the efforts of the entrepreneurial companies as suggested by Acs and Szerb (2007) in the case of global IT industry, or due to the predominant role played by the MNCs as suggested in the case of Indian IT industry (Patibandla and Peterson, 2002) is a question that warrants deeper analysis.

This understanding is crucial from a policy perspective. Prior research has shown that the entrepreneurial framework conditions are in general weak in India (Manimala, 2002). India was seen to be lagging behind the average for the 32 countries that participated in the GEM study in 2002, in all but four of the 14 Entrepreneurial Framework conditions that were measured by the study (Manimala, 2002). The weak framework conditions that were found to be prevalent at the national level were corroborated through studies that identified the barriers to growth at the regional level in Bangalore (Bhide, 2004). In depth interviews with hundred high growth firms in Bangalore revealed that the Bangalore firms started small and remained small, and were faced with formidable barriers to growth.

Kumar (2007a) has shown that the firms in IT sector have managed to overcome the growth barriers associated with businesses in Bangalore and have demonstrated a higher propensity to grow compared to their non-IT counterparts. The typical characteristics of the IT industry such as its services nature and limited value chain was seen to render some of the growth barriers like lack of power and roads infrastructure less obstructive. The positive actions of the private market forces were seen to result in mitigating some of the major barriers created by the absence of public services and adequate infrastructure. Specific promotional policies, targeted towards the IT sector and delivered through the Software Technology Parks of India (STPI) was also highlighted as a major factor in enabling the IT sector to overcome the growth barriers associated with Bangalore (Kumar, 2007a).

OBJECTIVES

The foregoing review of the literature clearly indicates a need for a firm level understanding of how the IT sector firms managed to overcome the barriers to growth otherwise prevalent in Bangalore. This paper specifically seeks to analyze the IT sector in Bangalore at the firm level to address a few questions that are relevant from the perspective of entrepreneurship. Who are the actors or entrepreneurs who facilitated the IT sector to overcome the barriers to growth experienced by the Bangalore firms? What is the relative contribution of the different activities or types of opportunities within the IT industry to its overall growth? The answers to these questions could provide insights to policy makers seeking to nurture entrepreneurship in a region endowed with not so favorable entrepreneurial framework conditions, given the challenge involved in improving these conditions to encourage high growth entrepreneurship.

METHODOLOGY AND DATA COLLECTION

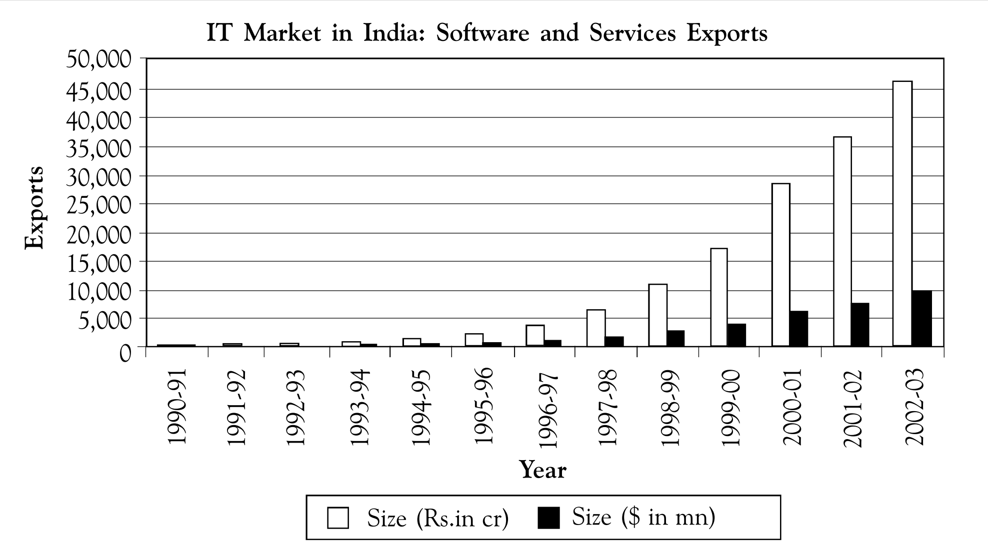
The primary source of data for the IT businesses was the Software Technology Parks of India (STPI). The STPI was set up as a society in 1991 by the Government of India in order to promote the IT sector and direct the policy support of the government to the IT industry, The specific policy support provided to the IT firms under the STPI scheme included duty free import of capital goods in exchange for undertaking export obligations, approvals for bringing in foreign equity, provision of technical infrastructure and services like satellite connectivity, temporary office space etc. (Saxenian, 2001; and Parthasarathy, 2004). A registration with the STPI was mandatory in order to avail all of these concessions and support. Once registered, an STPI unit (as they are referred to) is also obliged to submit to the STPI a quarterly as well as an annual report on various aspects of its performance, such as export earnings, the amount of import duty concessions availed, the wage bill, the number of people employed, etc. The STPI collated the data in these reports and presented its own annual report to the central government.

The main source of firm level data for this study are the annual reports filed by the units with STPI, Bangalore. Annual reports filed by the STPI units in Bangalore were collected for six years from 1998 to 2003 from STPI. The data for this study was collected in 2004, and covered all the previous years for which the data could be made available by STPI. Interestingly, this period also witnessed an exponential growth in the IT industry, as could be seen from Figure 1. Since all the STPI units were required to file the annual reports, there was no sampling involved and the study covered all the units registered with the STPI during the relevant period and which filed the annual reports. There were incomplete annual reports in which the units concerned had not provided the data on employment. In such cases, the data on wage bills provided in the report and the average wage increases across the industry during the corresponding period were used to estimate employment.

Extensive search of the published information—websites, business and industry publications—about individual STPI units was carried out to ascertain the ownership status and the type of activity carried out by each of the STPI units. This information was used to group the STPI units under different categories as explained below.

On the basis of ownership, the IT businesses in Bangalore were classified either as Indian companies or multinational firms (MNCs). The Indian

Figure 1: Software Exports of India—A Graphical Representation



companies were further classified based on whether they were standalone private or public companies or they were subsidiaries of a privately held or publicly owned group. Similarly, the Multinational Companies (MNCs) were in turn classified on the basis of whether the parent is a large MNC, Small and Medium Enterprise (SME) MNC or a firm owned by Non-Resident Indians (NRIs). The details of this classification along with specific examples of firms under each classification are presented in Table 2.

Given the variety in the activities undertaken by the Bangalore IT firms, they were also classified by the type of activities undertaken by them. At the high end of the spectrum, there were firms involved primarily in product development and creation of Intellectual Property (IP). At the lower end of the spectrum, there were firms engaged mainly in providing IT Enabled Services (ITES), otherwise known as BPO (Business Process Outsourcing) firms. In between, there were firms involved in software application development and maintenance services, an activity for which the Indian IT firms had developed a reputation for. There were also firms providing specialized engineering IT services, while a few firms were providing some specialized service or other along with application development and maintenance services. The details of this activity-based classification of firms along with specific examples under each category are presented in Table 3.

Table 2: Classification of IT Firms Based on Ownership

S. No.	Ownership Category	Examples of Firms Under This Category
1.	Stand-alone Indian public companies	Infosys, Infotech enterprises
2.	Stand-alone Indian private companies	Planetasia, Ampersand
3.	Subsidiaries of Indian public groups	WIPRO, BlueStar, L&T Infotech
4.	Subsidiaries of Indian private groups	TCS, Birlasoft, Manipal Informatics
5.	Subsidiaries and JVs of large MNCs	IBM, Motorola, SAP
6.	Subsidiaries of SME MNCs	Evolus, Network Associates
7.	Subsidiaries of NRI controlled MNCs	Apex, Axes, Covansys

Table 3: Classification of IT Firms Based on Activity

S. No.	Activity Type	Examples of Firms in This Category
1.	IP creation and product development	i-Flex
2.	Software application development and maintenance services	HP India, Hexaware
3.	IT enabled services	ICICI One Source, Transworks
4.	Engineering IT services	Intel
5.	IT services plus others	Cerebra, Purple Vision

There were of course a few firms whose activities could not be classified for lack of reliable data, but the number of such firms was quite small as could be seen from the tables presented below.

Table 4: Changes by Ownership Category in Number of Units (1998-2003)

Ownership Type	Number of Units				Increase in Number of Units 1998-2003	No. of Units in 2003/No. of Units in 1998
	1998		2003			
	No.	% of Total	No.	% of Total		
Stand-alone Indian public corporate	9	6.9	21	3.6	12	2.3
Stand-alone Indian private corporate	26	20.1	191	33.5	165	7.3
Subsidiary of Indian public group	10	7.8	17	2.9	7	1.7
Subsidiary of Indian private group	5	3.8	46	8	41	9.2
Sub/JV of large MNC	41	31.7	94	16.5	53	2.3
Sub of SME MNC	10	7.8	92	16.1	82	9.2
NRI controlled MNC	24	18.6	105	18.4	81	4.4
Not classified	4	2.3	3	1.0	(1)	0.8
Total	**129**	**100.0**	**569**	**100.0**	**440**	**4.4**

Source: Collated from annual reports of units filed with STPI

PATTERNS IN NEW FIRM FORMATION AND EMPLOYMENT GROWTH AMONGST BANGALORE'S IT FIRMS

The changes in employment were tracked under each identified category explained above over the five year period between 1998 and 2003. Changes in the number of firms, changes in employment in the firms and the dynamic changes in employment under each category were computed which yielded interesting insights.

CHANGES BASED ON OWNERSHIP PATTERNS

New Firm Formation and Ownership of Firms

The classification of the number of Bangalore IT firms by ownership patterns is presented in Table 4. The standalone Indian private firms have grown more than seven-fold during the five year period. As a percentage of all units, the share of this category increased from 20.2% in 1998 to 33.6% in 2003. In absolute terms, the increase in the number of firms in this category is the highest amongst all the different categories of IT units during the period under study. The subsidiaries of NRI controlled MNCs have also increased nearly five-fold during the period—from 24 in 1998 to 105 in 2003, but as a percentage of all units, had remained nearly constant. The standalone private domestic corporate and the subsidiaries of NRI controlled MNCs are closest to what one may call autonomous start-ups initiated by entrepreneurs either individually or in groups. These two categories together have accounted for more than half of the increase in the number of units during the five year period. Hence, it is reasonable to conclude that the IT businesses in Bangalore have seen a high incidence of entrepreneurship during the period between 1998 and 2003.

Employment Growth and Ownership of Firms

Table 5 depicts the employment accounted for by firms under different categories of ownership. There had been a five-fold increase in total employment in all IT units between 1998 and 2003. Firms under almost all categories of employment have registered increases in employment during this period, some starting from a very small base. At the individual category level, the increase in employment in the subsidiaries and JVs of large MNCs was found to be far more striking than all other categories. As seen from Table 4, the increase in the number of units under this category of ownership had been modest—a little over two-fold from 41 in 1998 to 94 in 2003, and their percentage share amongst all units had decreased from 31.8% to 16.5% in the corresponding period. But the employment accounted for by the firms in this ownership category had substantially increased over seven-fold. In absolute terms, the increase in employment in this category—from 35,270 during the five year period—had accounted for nearly 40% of the total increase in employment in all IT units during the period. Also, the share of total

Table 5: Changes by Ownership Category in Employment (1998-2003)

Ownership Type	Number of Employees				Increase in Employment 1998-2003	No. of Employees in 2003/ No. of Employees in 1998
	1998		2003			
	No.	% of Total	No.	% of Total		
Stand-alone Indian Public Corporate	3,132	14.5	11,730	10.8	8,598	3.7
Stand-alone Indian Private Corporate	1,071	4.9	12,234	11.2	11,163	11.4
Subsidiary of Indian Public Group	2,769	12.7	13,046	12.0	10,277	4.7
Subsidiary of Indian Private Group	1,335	6.1	7,961	7.3	6,626	5.8
Sub/JV of Large MNC	5,232	24.1	40,502	37.1	35,270	7.7
Sub of SME MNC	169	0.7	5,876	5.4	5,707	34.8
NRI Controlled MNC	7,803	36.4	17,705	16.2	9,902	2.3
Not Classified	137	0.6	22	0.0	(115)	–
Total	**21,648**	**10.0**	**109,076**	**100.0**	**87,428**	**5.0**

Source: Collated from Annual Reports of Units Filed with STPI employment in all IT units, accounted for by firms in this ownership category had increased from 24.17% in 1998 to 37.13% in 2003. Thus, both in absolute and relative terms, the subsidiaries and the JVs of large MNCs had been accelerating the employment growth in the IT businesses between 1998 and 2003.

Employment Changes Due to Dynamics of Firm Births, Expansions and Deaths and Ownership of Firms

The net changes in number of units and the employment under different ownership categories presented in Tables 4 and 5 were a result of a dynamic process of birth, death, expansion and contraction of units during the period. The net changes in employment would be a result of the addition to employment due to the formation of new units during the period and the expansion of employment in units, both new and those existing in the prior periods, and the reduction in employment due to the contractions or closures of both new units and those existing in prior periods. It is revealing to see the distinctive impact of such dynamics on the relative contribution of units under different ownership to the overall change in employment, as shown in Table 6.

The subsidiaries and Joint Ventures (JVs) of large MNCs added much more jobs through scaling up and expansion of units—both new units opened during the period and those existing in the prior period. In contrast, the units under the standalone Indian private company category exhibited a higher level of churn. While units under this category created substantial number of jobs at the time of opening of new units, they also lost a significant number of jobs due to contraction of new units and the closure of units existing in the prior period. Thus, it would be appropriate to say that the IT sector had over the five year period emerged as a combination of steadily growing multinational firms and an active and turbulent group of home grown start-ups.

CHANGES BASED ON TYPE OF ACTIVITY

New Firm Formation and Activity of Firms

In terms of the type of activity undertaken by the IT units, presented in Table 7, the increase in the number of ITES firms had been spectacular—the number of ITES units had increased from a mere two in 1998 to 78 in 2003, accounting for 13.7% of all IT firms in 2003. The IP and product development firms, despite adding 94 units to their category during the period, had seen their share of all firms decline slightly from 27.9% in 1998 to 22.8% in 2003. The software services and application development and maintenance units had seen their number increase nearly four-fold, accounting for almost half of the increase during the five year period, even though their share of all firms had declined from 57.4% to 49.9% during this period. Thus in terms of number of firms, ITES and software services firms have been leading the growth, closely followed by the IP and product development firms.

Employment Growth and Activity of Firms

In terms of employment, the jobs accounted for by the firms involved in

Table 6: Dynamic Changes in Employment by Ownership Category (1998-2003)*

Employment Changes in Period 1999-2003	Ownership Type								
	Total	Stand-Alone Indian Pub. Co.	Stand-Alone Indian Pvt. Co.	Sub of Indian Pub. Group	Sub of Indian Pvt. Group	Sub/JV of Large MNC	Sub of MNC SME	Sub of NRI Controlled MNC	Not Classified
Employment end of prior period Jobs added by new units opened in current period.	21,648	3,132	1,071	2,769	1,335	5,232	169	7,803	137
1. At the time of opening.	37,733	2,721	8,779	2,703	5,861	8,803	3,425	5,232	209
2. Jobs added due to expansions of new units.	34,973	2,881	4,200	915	2,666	14,175	1,440	8,695	1
3. Jobs lost due to contraction of new units.	1,673	23	1,031	24	244	67	156	117	11
Jobs added by expansions of units existing in prior period.	25,950	1,717	1,142	7,983	488	10,977	11,95	2448	0
Jobs lost due to contractions of units existing in prior period.	2,849	1,490	11	513	0	688	13	134	0
Jobs lost due to closures or debonding of units existing in prior period.	1,132	143	246	433	17	81	41	34	137
Jobs at the end of the period.	109,074	11,730	12,233	13,046	7,961	40,504	5,875	17,704	21

Note: * Column total will not be exact due to adjustments for missing data.

Source: Collated from Annual Reports of Units Filed with STPI

ITES had increased more than 22-fold between 1998 and 2003, as shown in Table 8. The share of ITES in total employment had also increased from 6% in 1998 to 26.1% in 2003. The employment in software services firms had also seen a five-fold increase during the five year period, but their share of total employment had increased only modestly from 48.5% to 51.9% in the corresponding period. Though the IP and product development firms had shown an absolute increase of more than two-fold in their employment, their share of total employment in all IT firms had declined sharply from 40.9% in 1998 to 16.8% in 2003. Thus, growth in employment has been driven by the ITES and software services firms which together accounted

Table 7: Changes by Activity Type in Number of Units (1998-2003)

Activity Type	Number of Units				Increase in Number of Units 1998-2003	No. of Units in 2003/ No. of Units in 1998
	1998		2003			
	No.	% of Total	No.	% of Total		
IP and product development	36	27.9	130	23.1	94	3.6
Software services, application development and maintenance	74	57.3	284	53.0	210	3.8
IT Enabled Services (ITES)	2	0.1	78	11.6	76	39.0
IT engineering services	11	8.5	42	5.6	31	3.8
Software services + Others	3	2.3	15	3.1	12	5.0
Not classified	3	2.3	20	3.5	17	6.7
Total	**129**	**100.0**	**569**	**100.0**	**440**	**4.4**

Source: Collated from Annual Reports of Units Filed with STPI

Table 8: Changes by Activity Type in Employment (1998-2003)

Activity Type	Number of Employees				Increase in Employ-ment 1998-2003	Emplo-yees in 2003/ Employees in 1998
	1998		2003			
	No.	% of Total	No.	% of Total		
IP and product development	8,849	40.9	18,311	16.8	9,462	2.1
Software services, application develop-ment and maintenance	10,502	48.5	56,557	51.9	46,055	5.4
IT Enabled Services (ITES)	1,294	6.0	28,483	26.1	27,189	22.0
IT engineering services	554	2.6	3,434	3.1	2,880	6.2
Software services + Others	346	1.6	869	0.8	523	2.5
Not classified	103	0.5	1,422	1.3	1,319	–
Total	**21,648**	**100.0**	**109,076**	**100.0**	**87,428**	**5.0**

Source: Collated from Annual Reports of Units Filed with STPI

Table 9: Dynamics Changes in Employment by Activity Type (1998-2003)

Employment Changes in Period	Activity Type (Absolute Numbers)						
	Total	IP Product Dev.	Software Services, Application Dev. and Maintenance	ITES	IT Engg.	Software Services + Other	Not Classified
Employment at end of prior period.	21,648	8,849	10,502	1,294	554	346	103
Jobs added by new units opened in current period.	–	–	–	–	–	–	–
1. At the time of opening.	37,733	4,791	15972	11,385	1887	3,064	634
2. Jobs added due to expansions of new units.	34,973	4,827	12,163	16,002	1,531	52	398
3. Jobs lost due to contraction of new units.	1,673	93	891	115	376	181	17
Jobs added by expans-ions of units existing in prior period.	25,950	6,519	17,514	1,352	220	345	–
Jobs lost due to contract-ions of units existing in prior period.	2,849	6	2,745	0	0	98	–
Jobs lost due to closures or debonding of units existing in prior period.	1,132	225	634	0	170	0	103
Jobs at the end of the period.	109,074	18,311	56,556	28,482	3,436	868	1,421

Note: Column total will not be exact due to adjustments for missing data.

Source: Collated from Annual Reports of Units Filed with STPI

for nearly 80% of the increase in employment during the period.

Employment Changes Due to Dynamics of Firm Births, Expansions and Deaths and Activity of Firms

The dynamic changes in employment, shown in Table 9, clearly show that all activities contributed to increase in employment mainly through expansions. The software services and the IT enabled services have expanded far more rapidly than the IP and product development activities. This shows clearly that the IT industry in Bangalore moved down the value chain rather than moving up the value chain, and in activities that are more labor intensive but demanding lesser technical skills. It is also interesting to note that some jobs had indeed been lost

Table 10: Local Entrepreneurship in Bangalore's IT Sector (1998-2003)

Estimates for Bangalore Population/STPI Units	Non-IT Businesses	IT Businesses	Standalone Indian Private IT Companies
Net change in employment during the period.	68,480	87,246	11,162
Employment added due to 'births' (new registrations/units).	38,7400	37,733	8,779
Employment added by Registrants/ units expansions.	2,6440	60,923	5,342
Employment lost due to 'deaths' (closures/presumed closures).	33,4870	4,076	638
Employment lost due to registrants/ units contractions.	8,020	4,522	1,042
Gross jobs created per net addition.	6	1.1	1.3

Source: Collated from Annual Reports of Units Filed with STPI (Kumar, 2007a)

due to contractions in the software services activity, even in a high growth environment witnessed all around.

ENTREPRENEURSHIP IN THE IT SECTOR IN BANGALORE

The patterns shown in Table 10 provide some pointers to the features of entrepreneurship in the IT sector. To the extent that the standalone private Indian companies are closest to what one may call autonomous entrepreneurial ventures initiated by local entrepreneurs either individually or in groups, a closer scrutiny of firms under this ownership category will provide some insights into the local entrepreneurship in the IT sector in Bangalore. In terms of the number of new firms started by these local entrepreneurs, the figures presented in Table 3 indicate a high incidence of local entrepreneurship during the period between 1998 and 2003. However, the growth in employment in this category of firms have been more due to the new firm formations and less due to firm expansions, a trend that is in contrast to the IT sector as a whole and more in line with the non-IT businesses, as mentioned earlier. The growth in employment in the IT sector has been spearheaded by the large corporate entrepreneurs—specifically the multinational companies through their subsidiaries and JVs. Thus, the IT sector, over the five year period, has emerged as a combination of steadily growing multinational firms and an active group of local firms that have been struggling to grow.

FINDINGS

This study has thus attempted to understand the aspects of entrepreneurship behind the growth of the IT sector in Bangalore. By categorizing the units on the basis of ownership, the entrepreneurs behind the IT units were identified, and the intensity of entrepreneurial activity was ascertained through the increase in the number of units promoted by each category of entrepreneurs. By categorizing the units on the basis of activities carried out by them, the nature of entrepreneurial opportunity pursued within the IT sector by the individual units in terms of their value adding potential and innovation content. By analyzing the changes in employment in the IT sector as a whole and in the individual categories of units, the impact of the entrepreneurial efforts within the sector have been ascertained in terms of its most significant and observable outcome. Following the above analysis, the findings of this study can be summarized as:

- The standalone Indian private companies and the subsidiaries of NRI controlled MNCs have taken the lead in new firm formations.

- Both in absolute and relative terms, the subsidiaries and the JVs of large MNCs have been accelerating the employment growth in the IT businesses between 1998 and 2003.

- It is through scaling up and expansions that the large MNC units have been able to generate and drive employment growth amongst the IT businesses.

- The standalone Indian private firms, promoted by local entrepreneurs, have been struggling to grow and have seen their employment increase mainly through formation of new firms.

- On the activities side, in terms of number of firms, ITES and software services firms have been leading the growth, followed by the IP and product development firms.

- Growth in employment has been driven by the ITES and software services activities, with the ITES firms making up for the sluggish growth in employment in the IP and product firms.

DISCUSSIONS AND POLICY IMPLICATIONS

The findings of this study have policy implications, particularly for nations and regions that seek to achieve economic growth through entrepreneurship. The importance of FDI led entrepreneurship in promoting employment growth in developing economies, the role of multinational companies in the process of evolution of high-tech clusters in emerging economies, and the difficulty of home grown entrepreneurship to initiate innovative and high growth ventures in a predominantly export-oriented cluster in developing economies are some aspects of policy that deserve to be discussed in the backdrop of the findings of this study.

It is argued that in the context of developing economies, exploiting economies of scale is a better approach towards achieving economic growth than innovation led entrepreneurship (Wennekers *et al.*, 2005). This study reiterates this argument using the evidence gathered in the Bangalore context. The export orientation of the IT industry in Bangalore, in line with the pattern observed in the Indian IT industry as a whole, led to the relaxation of demand constraints thus setting the stage for achieving scale economies, (Patibandla and Peterson, 2002). Though this study did not attempt to specifically identify the presence of innovative firms and the role played by them, it has shown that within the IT sector, the largest additions to employment occurred through firm expansions that sought to achieve scale economies. Not only that, this study also shows that given the service focus of the IT industry in Bangalore, scale intensive segments such as IT application development and ITES, have achieved far higher growth than the less scale intensive activities like product development and IP creation.

Another aspect which is emphasized in the extant literature is that at a macro level, a policy framework that encourages Foreign Direct Investment (FDI) is likely to be more effective in bringing about economic growth in developing countries than policies that focus on R&D led innovations (van Stel *et al.*, 2005). The evidence provided through this study on the role of multinational companies in increasing the employment in the IT sector in Bangalore underscores the relevance of FDI in the context of a developing economy. As argued earlier, export orientation not only relaxed demand constraints, but also showcased the business potential in the international market, thus attracting the attention of multinational corporations.

Perhaps, this behavior of MNCs is quite in line with patterns observed elsewhere. In a study of Turkish manufacturing industry, foreign firms have been found to exhibit significantly different entry characteristics than domestic firms (Özler and Taymaz, 2004). The foreign entrants were found to be twice as large as domestic entrants and were shown, at the time of entry, to use more capital intensive technologies, pay higher wages, have better access to formal sources of funding, are more profitable, and have a stronger tendency to export relative to domestic firms. Further, this study also found that entry level differences persisted after entry, and the exit rates were much lower for foreign firms (Özler and Taymaz, 2004). Given the central role of MNCs—FDI led entrants—in Bangalore's IT industry, these patterns suggest that the employment growth is likely to sustain.

Even while recognizing that the MNCs have contributed in a big way to the growth of IT industry in Bangalore, it is important to discuss whether this has been at the expense of local entrepreneurship. It is generally believed that the Indian IT industry—Bangalore being no exception—has grown through local entrepreneurship set in a favorable policy regime. But our study questions—albeit inconclusively—whether such claims could be taken at their face value. It is a fact that some of the largest IT companies in India are headquartered in Bangalore and have their largest concentration of employees in Bangalore. However, the private Indian companies—the autonomous start-ups promoted by local entrepreneurs—have not exhibited the strong trends of growth as their multinational counterparts. In fact, their growth trends have a much closer resemblance to their low growth non-IT counterparts. In other words, they have not been able to overcome the growth barriers that are associated with Bangalore businesses, in the same way as the multinational firms have been able to do (Bhide, 2004; and Kumar, 2007a).

Perhaps, there is an alternative explanation that can be advanced in this context. The large number of firms that have been promoted by the local entrepreneurs points to their role in improvising and fine-tuning a process innovation that characterizes the IT services delivered out of India. However, prior research shows that small firms are generally more capable of being innovative; but the large firms are seen to be in a better position to appropriate the results, particularly of process innovation (Acs *et al.*, 1999). The evidence presented in this paper about the IT firms in Bangalore clearly demonstrates this point. Local entrepreneurship has perhaps show cased a process innovation—the offshore software development—but the larger and more resourceful multinational firms have stepped in to leverage the innovation towards generating substantial growth in employment.

Theoretical arguments have been advanced to suggest that the entry of multinationals, through their impact on product and labor markets, can push the local entrepreneurship into the background (De Becker and Slewaegen, 2003). Prior studies on Indian IT industry has corroborated this possibility. It is argued that the increasing presence of Transnational Corporations (TNCs) inhibits the movement of small local firms into high-end operations. It is also argued that the small local firms end up becoming the training ground for the multinational firms and skilled human resources, after acquiring experience in the small firms, move on to work for the MNCs (Patibandla and Peterson, 2002). The tear away growth in employment accounted for by the MNCs highlighted by our study alludes to this possibility.

Another related issue is the spill-over benefits that arise out of the dominant presence of multinational enterprises in Bangalore's IT cluster. Earlier studies have contended that the gains accruing from the entry of MNCs in the Indian software industry have been distributed more in favor of the home country of the multinational enterprises (Kumar, 2001). It has been argued that the spill-over benefits of the presence of multinationals in India's IT industry have been more of employment generating rather than technology generating (Patibandla and Peterson, 2002). This study confirms such observation, by demonstrating that the employment growth in ITES and software application development services is far higher than the employment growth in IP and product development.

Prior research contends that in order to maximize benefits of inward FDI on indigenous industry, the host country policies should seek to attract FDI that has the potential to offer spill-over benefits, and complement this with entrepreneurship policies that encourage local entrepreneurs to take advantage of such spill-over (Acs *et al.*, 2007, and Terjesen *et al.*, 2007). The redeeming feature, from the point of view of spill-over benefits in the Bangalore IT industry, is the observation in our study that the employment in product development and IP creation activities are also growing and the multinational companies are accounting for an increasingly higher share of such activities. Local entrepreneurship is seen to be playing a crucial role in technological upgradation and in effecting a shift from low skill to high skill services in Bangalore (Parthasarathy and Aoyoma, 2006). Anecdotal evidence also points to the spin-off of high-technology entrepreneurship stimulated by the presence of the multinational companies in IP and product development activities (Kumar, 2007b).

CONCLUSIONS AND SCOPE FOR FUTURE RESEARCH

This study has tried to shed light on the role of local entrepreneurship on the growth of the IT sector in Bangalore. The local entrepreneurs in the IT sector in Bangalore have been found to be active in starting new firms. However, the growth in employment through expansion of firms has been largely spearheaded by the multinational companies in Bangalore. While the local entrepreneurs have been playing a leading role in imparting breadth and dynamism to the IT sector in Bangalore, the large multinational companies have been playing a stellar role in realizing the potential of the IT sector in the form of sustained growth in employment.

However, the findings have to be interpreted cautiously. It should be noted that this study has attempted to decipher the growth patterns within a particular location—Bangalore—and not the industry as a whole at the national level. It is also well known that some of the larger Indian companies, i.e., those which are not multinational companies—have expanded into locations outside Bangalore such as Chennai, Hyderabad, Pune, Mohali, etc. Further study of other locations will have to be carried out, after formulating suitable hypotheses based on this study, to verify if the patterns observed in Bangalore are replicated in those locations.

At the firm level, the findings of this study raise some interesting questions that are worth exploring in detail. Evidence exists to say some of the firms started by the local entrepreneurs—such as Infosys, and Wipro to name a few—have managed to overcome the barriers to growth. The growth of these entrepreneurial firms needs to be analyzed in the backdrop of the growth barriers to identify the role of firm specific strategies on the growth of these companies. Faced with the same strategic issues—building capacity, choosing target markets and service offerings, etc., did the high growth entrepreneurial firms systematically make choices that are quite different from the ones made by firms which are struggling to grow? This would be a very interesting question to address in future research.

This study has focused only on one dimension of growth which is employment. Analysis of other dimensions of growth such as revenue and profits might shed more light on the role of local entrepreneurs in the growth of IT sector in Bangalore. As mentioned earlier, the propositions about the qualitative role played by the local entrepreneurial firms in adding depth to the IT sector in Bangalore by spearheading the development of deeper technical skills also warrants a more systematic study.

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Organizational Outcomes of the Employees' Perceptions of Performance Appraisal Politics: A Study on Executive MBA Students in Bangladesh

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Politics is assumed to be woven into every fabric of lives in Bangladesh. Politics is also indicated to occur in the managers' use of power in ascertaining and distributing rewards for the employees. However, politics in performance appraisal which is a critical process of reward determination in the organizations remains under-researched. Against this backdrop, the study investigates the relationship of employees' Perceptions of Performance Appraisal Politics (POPAP) with the employees' organizational outcomes such as job satisfaction, organizational commitment and turnover intention among the full time working (executive) MBA students in Bangladesh. The results of this study on the 67 executive MBA students selected from the four business schools in Bangladesh confirms that the employees' POPAP for punishment motive significantly reduces their job satisfaction and organizational commitment and encourages them to quit the organization. Contrarily, the employees' POPAP with a motivational motive, increases job satisfaction and organizational commitment and reduces the turnover intention of the employees. The study also opens up a broad avenue for research in the performance appraisal politics in Bangladesh.

INTRODUCTION

Managers have strong political reasons to manipulate employees' performance rating which influences the employees' organizational outcomes such as the organizational commitment and turnover intention (Longenecker *et al*., 1987; Ferris *et al*., 1996; Mani, 2002; and Poon, 2003).

In an earlier study done in the Malaysian context, Poon (2004) showed that the managers do manipulate the performance appraisals of their

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subordinates. Based on this manipulation, the subordinates develop their Perceptions of Performance Appraisal Politics (POPAP) which ultimately results in the employees' turnover intention. Poon (2004) also suggested that the different outcomes may emerge when the POPAP is influenced by the two contradictory reasons such as the motivational motive vs. the punishment motive. The employees' POPAP for the motivational motive may result in the positive organizational outcomes (greater job satisfaction and lower turnover), whereas the employees' POPAP for the punishments motive may lead to negative organizational outcomes (such as reduced job satisfaction and higher inclination to quit).

A literature survey reveals that there is no study done in the Bangladeshi context specifically addressing the issue of employees' motivation to increase or reduce the performance because of POPAP. Some studies have made only circuitous references to the employees' POPAP in Bangladesh. For instance, Jahangir (2003) investigated a relationship between the managers' use of power, procedural justice, and employees' job satisfaction, and organizational commitment in the Nationalized Commercial Banks (NCBs) in Bangladesh and observed that the managers of NCBs in Bangladesh do not use their reward power to appraise the employees; they appraise the employees exclusively on the basis of the job performance. In addition, the appraisal process is greatly influenced by the managers' political motives such as the managers' personal preferences, employees' involvement with the unions, and the philosophy of top management. Similar observations have been made by Huq (1991) and Rahim and Magner (1996). This study has replicated the studies of Poon (2004) and Gillian and Richardson (2005) in the Bangladeshi context. However, it includes organizational commitment as an added variable for examining the relationship of the employees' POPAP along with job satisfaction and turnover intention variables of earlier studies.

LITERATURE REVIEW

PERFORMANCE APPRAISAL POLITICS

Performance appraisal is a formal organizational procedure. The managers use this procedure to measure and evaluate their subordinates' performance with formal rating instruments on an annual or semi-annual basis (Longenecker and Ludwig, 1990). Tziner *et al.* (1996) observed that a majority of the research on performance appraisal distortions concentrated on the non-deliberate rating distortions by the raters based on the assumptions that if the raters had the required skills, the exact rating instruments and the correct procedures, accurate ratings would automatically follow. For instance, the study of Pulakos (1986) on the performance rating focused on the training programs concluded that the raters would accurately rate if they had the proper training on rating performances. Longenecker *et al.* (1987) and Longenecker and Gioia (1988) were the first to mention that managers can distort the performance appraisals of their subordinates intentionally. These researchers asserted that performance appraisals in the organizations do not take place in a vacuum, rather, the process is influenced by the organizational politics in general and the political intentions of the raters in particular. They drew on their research to argue that managers often manipulate performance ratings of their subordinates in order to realize some of their own personal motives. They indicated that such motives could be obtaining rewards for the subordinates or acquiring additional resources of their own departments. Managers' pursuit of such personal goals in the performance appraisal process has been defined as the performance appraisal politics (Longenecker *et al.*, 1987; and Longenecker and Gioia, 1988).

Longenecker and Ludwig (1990) broadened the study of Longenecker *et al.* (1987) and proposed a typology of the rater motives and manipulative behavior in the appraisal process to describe the performance appraisal politics (Figure 1). The typology classifies the motives of the raters into two types—positive and deviant and also asserts that the managers either inflate or deflate ratings in order to accomplish these motives (Longenecker and Ludwig, 1990). Tziner *et al.* (1996) renamed these motivations as the motivational motive and punishment motive, and observed the measures that the managers adopt in realizing these motives.

Figure 1: A Typology of Rater Motives and Manipulative Rating Behavior

RATER'S MOTIVE	INFLATE	DEFLATE
POSITIVE	• Keep the employee motivated • Maximize the merit pay increase • Avoid creating a permanent record that might damage the employees' career • Reward good performance • Assist an employee with a personal problem • Reward employees with high effort for reward though performance is low. • Liking the subordinate personally	• Scare better performance out of an employee to prevent eventual termination • Build a stronger case against an employee who is destined to be terminated
DEVIANT	• Avoid spreading a bad repute of the department • Make themselves look good • Avoid conflict/confrontation with a subordinate • Promote a problem employee up and out	• Punish an employee • Encourage an employee to quit • Minimize merit pay increase • Comply with an organizational edict to keep ratings low

Source: Longenecker C O and Ludwig D (1990), p. 963

RELATIONSHIP BETWEEN PERFORMANCE APPRAISAL POLITICS AND JOB SATISFACTION

Ferris *et al.* (1989) developed a model of perceptions of organizational politics, which demonstrates that organizational politics of any kind is associated with job anxiety, job satisfaction, job involvement, and organizational withdrawal. The supervisors' fairness in performance appraisal is a predictor of employees' satisfaction with supervision and this in turn, leads to their increased job satisfaction. Nye and Witt (1993) concluded that the employees' perceptions about the workplace politics such as an unfair appraisal are negatively correlated with job satisfaction.

RELATIONSHIP BETWEEN PERFORMANCE APPRAISAL POLITICS AND ORGANIZATIONAL COMMITMENT

Mowday *et al.* (1982) observed that the employees' perceptions of organizational politics of any kind influence the employees' organizational commitment. Parker *et al.* (1995) in their study on some government employees posited that the employees' perceptions of unfairness in reward decisions reduce the organizational commitment of the employees. They suggested that such lower commitment can lead to lower involvement with their work, and increase the turnover intention.

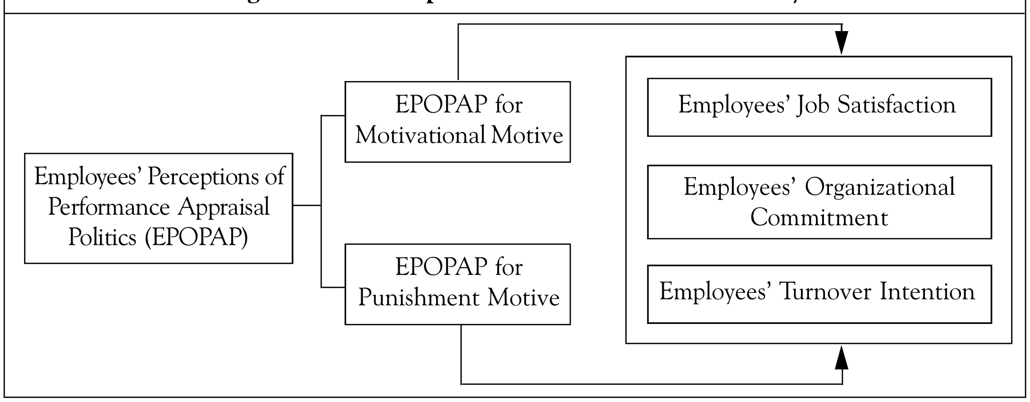
RELATIONSHIP BETWEEN PERFORMANCE APPRAISAL POLITICS AND TURNOVER INTENTION

Ferris *et al.* (1999) used the model of Ferris *et al.* (1989) to study the outcomes of perceptions of the workplace politics. They demonstrated that the employees' perceptions of supervisors' manipulative behavior in the appraisal process is positively correlated with the employees' turnover intention. The employees' turnover intentions are positively related to their perceptions of the workplace politics, specifically, if they perceive that the managers are manipulating the performance appraisal process to realize their own workplace political agenda (Randall *et al.*, 1999; and Poon, 2004).

RESEARCH MODEL AND HYPOTHESIS

The conceptual framework of the research to establish the relationship among the studied variables is presented in Figure 2.

Figure 2: Conceptual Framework of the Study



From this framework, following hypotheses have been developed for the study:

H_1: *Employees' POPAP for the motivational motive significantly increases the employees' job satisfaction.*

H_2: *Employees' POPAP for the punishment motive significantly reduces employees' job satisfaction.*

H_3: *Employees' POPAP for the motivational motive makes the employees more committed towards the organization.*

H_4: *Employees' commitment towards the organization is significantly reduced by their POPAP for the punishment motive.*

H_5: *Employees' POPAP for the motivational motive significantly reduces the employees' turnover intention.*

H_6: *Employees' POPAP for the punishment motive significantly increases their turnover intention.*

H_7: *Employees' POPAP and its outcome differs significantly based on gender.*

H_8: *Employees' POPAP and its outcome differs significantly based on age.*

H_9: *Employees' POPAP and its outcome differs significantly based on the type of employees.*

H_{10}: *Employees' POPAP and its outcome differs significantly based on experience (in years).*

METHODOLOGY

RESEARCH APPROACH

A correlational research design has been adopted for the study. To investigate the research questions, data were collected from the full time working (executive) MBA students of four business schools in the country, namely, the Institute of Business Administration (Executive MBA Program) of the University of Dhaka; the Faculty of Business Studies (Evening MBA Program) of the University of Dhaka; the School of Business (MBA Program) of the North South University; and the School of Business (MBA Program) of the Independent University, Bangladesh. A total of 150 questionnaires were sent to the four business schools out of which 70 questionnaires were returned. Three questionnaires were omitted for missing data. This led to a response rate of 33.5%.

OPERATIONAL DEFINITIONS OF VARIABLES

Employees' Perceptions of Performance Appraisal Politics (POPAP)

This variable was measured by using a 14-item scale adopted from the Questionnaire of Political Considerations in Performance Appraisal (QPCPA) developed by Tziner *et al.* (1996) and Poon (2004). Eight items were used for measuring the EPOPAP for the motivational motive and the rest six items were for measuring the EPOPAP for the punishment motive. The responses to each item were recorded on a 6-point Likert type scale ranging from '1' (very atypical) to '6' (very typical).

Employees' Job Satisfaction

This variable was measured by using the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss *et al.* (1967). The original instrument consists of 20 items. However, two items were deleted during a pilot testing of the questionnaire due to their ambiguity and repetitive nature reported by the respondents. Hence, the finally adapted MSQ consisted of 18 items. Responses to each item were recorded on a 5-point Likert type scale ranging from '1' (very dissatisfied) to '5' (very satisfied).

Employees' Organizational Commitment

The variable was measured by a 7-item short form of the Organizational Commitment Questionnaire (OCQ) developed by Mowday *et al.* (1979). Each item is cast on a 5-point Likert scale ranging from '1' (strongly disagree) to '5' (strongly agree).

Employees' Turnover Intention

The variable was measured by using three items. The items were combined and adopted through a pilot testing from the scales of Carmeli (2003) and Chiu and Francesco (2003). The original questionnaires were based on the turnover intention process proposed by Mobley *et al.* (1978). The responses to all the three items were recorded on a 5-point Likert-type scale ranging from '1' (strongly disagree) to '5' (strongly agree).

DATA ANALYSIS PROCEDURE

The study is a correlational study. Hence, correlation matrices have been used to identify whether the relationship exists between the measured variables or not. In addition, regression analysis has been carried out to find out the strength of association between the studied variables. Besides, a demographic profile of the respondents has also been provided. SPSS 12.0 has been utilized as a data analysis tool.

RESUTLS AND INTERPREATION

DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Of the 67 respondents, 88.1% were male and 11.9% were female. The classification of age shows the sample is dominated by younger managers (Table 1).

Table 1: Age Distribution of the Respondents

Age (Years)	Frequency	Percent
20 to less than 30	52	77.6
30 to less than 40	12	17.9
40 to less than 50	3	4.5
Total	**67**	**100.0**

77.6% of the respondents' age range from 20 to less than 30. On the other hand, the age of the rest of the respondents ranges from 30 to less than 50.

The work experience of the sample respondents is up to 20 years (Table 2). In fact, only one respondent has 20.5 years of experience. Most of the respondents (as high as 58.2% have experience of two or less than two years) are new comers in their respective jobs.

Table 2: Length of Service

Experience (Years)	Frequency	Percent
Up to 2	39	58.2
2 to 4	12	17.9
4 to 6	10	14.9
6 to 8	6	9.0
Total	**67**	**100.0**

FINDINGS AND INTERPRETATION OF DESCRIPTIVE AND CORRELATION ANALYSIS

Descriptive and correlations statistics among the studied variables are listed in Tables 3 and 4. The reliability coefficient (α), mean, and standard deviation (SD) of all the constructs in the current study are displayed in Table 3. The coefficient α for the different constructs were computed using the reliability procedure in SPSS. Nunnally (1978) suggested that for early stages of any research, a reliability of 0.50 to 0.60 is sufficient and the reliabilities of all the constructs in this study were found to be within an acceptable range.

The mean score for job satisfaction is 3.7470 (SD = 0.61438), which means that the employees have moderately high level of job satisfaction. The seemingly lower standard deviation supports the employees' accord on this issue. The mean score for the organizational commitment is 3.6908 (SD = 0.81634) indicating that the employees are almost committed to their organizations; however, the SD of around 82% shows such attitude of the employees vary within the sample. The mean value for turnover intentions of the employees is 2.8010 (SD = 1.24595). It implies that the intention of the employees to switch their respective organizations is low; however, the response varies to a larger extent, resulting in a higher level of the SD. Regarding the perception of the fairness of performance appraisal, mean score for the motivational motive is 3.6028 (SD = 0.91302) and for the punishment motive is 3.5445 (SD = 1.01857). Although the mean values suggest the presence of POPAP in terms of both the motivational motive and punishment motive, higher standard deviations imply that the responses are not homogenous in nature.

Correlation analysis was conducted on all the variables to explore the relationship among those. The bivariants correlation procedure was subject to a two tailed statistical significance at two different levels: highly significant ($p < 0.01$) and significant ($p < 0.05$). The result of correlation analysis (Table 4) provides job satisfaction ($r = -0.315$, $p < 0.01$), organizational commitment ($r = -0.257$, $p < 0.05$), and turnover intention ($r = 0.376$ $p < 0.01$) are statistically and significantly correlated with the independent variable, punishment motive.

Table 3: Number of Items, Mean, Standard Deviation, and Standardized Cronbach Alpha of Each Variable

Variables	Number of Items	Mean	SD	α
Job Satisfaction (JS)	18	3.7470	0.61438	0.908
Organizational Commitment (OC)	7	3.6908	0.81634	0.871
Turnover Intention (TI)	3	2.8010	1.24595	0.949
EPOPAP for Motivational Motive	8	3.6028	0.91302	0.857
EPOPAP for Punishment Motive	6	3.5445	1.01857	0.821

Note: N = 67.

Table 4: Correlation Matrix for Employees' POPAP (for Motivational Motive and Punishment Motive) with Employees' Job Satisfaction, Organizational Commitment and Turnover Intention

Variables	JS	OC	TI	EPOPAP for Motivational Motive	EPOPAP for Punishment Motive
Job Satisfaction	–	0.762**	–0.631**	0.132	–0.315**
Organizational Commitment		–	–0.634**	0.345**	–0.257*
Turnover Intention			–	–0.064	0.376**
EPOPAP for Motivational Motive				–	0.401**
EPOPAP for Punishment Motive					–

Note: *$p < 0.05$; **$p < 0.01$; JS: Job Satisfaction; OC: Organizational Commitment and TI: Turnover Intention

Contrarily, only the organizational commitment ($r = 0.345$, $p < 0.01$) is found to be significantly and positively correlated with the other independent variable, i.e., the motivational motive. Thus, it can be inferred that the strength of association among all the variables is weak.

FINDINGS AND INTERPRETATIONS OF STEPWISE REGRESSION ANALYSIS

The stepwise regression analysis is summarized in the Tables 5, 6 and 7. The regression results in Table 5 indicate that the punishment motive is negatively related with the job satisfaction. Besides, it alone explains 9.9% variation in employees' job satisfaction at $p < 0.01$. On the other hand, positive relationship with the motivational motive, explains 8% variability in the employees' job satisfaction at a level of $p < 0.05$.

The regression analysis in Table 6 indicates that the employees' POPAP for the motivational motive has a significant and positive effect on the employees' commitments toward the organizations. As opposed, the perceptions of

Table 5: Results of Stepwise Regression with Job Satisfaction as Dependent Variable

Variables	B	SE B	β	R^2	ΔR^2
Step One	–	–	–	0.099	–
EPOPAP for Punishment Motive	–0.190	0.071	–0.315**	–	–
Step Two	–	–	–	0.179	–
EPOPAP for Punishment Motive	– 0.265	0.075	–0.439**	–	–
EPOPAP for Motivational Motive	0.207	0.083	0.308*	–	0.08

Note: N = 67; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$; B = Coefficient (unstandardized partial regression coefficient); SE B = Standard error (sigma) of B; β = co efficient beta (standardized partial regression coefficient). R^2 = partial and marginal, R squared; ΔR^2 = Change in marginal R squared values of all predictors.

Table 6: Results of Stepwise Regression with Organizational Commitment as Dependent Variable

Steps of Regression	B	SE B	β	R^2	ΔR^2
Step One	–	–	–	0.119	–
EPOPAP for Motivational Motive	0.309	0.104	0.345**	–	–
Step Two	–	–	–	0.306	–
EPOPAP for Motivational Motive	0.478	0.102	0.535***	–	–
EPOPAP for Punishment Motive	–0.378	0.091	–0.472***	–	0.187

Note: N = 67; *p < 0.05, **p < 0.01, ***p < 0.001.

punishment motive appraises the employees significantly and negatively influences their commitment. The R^2 of 11.9% for the motivational motive at $p < 0.01$, and R^2 of 18.7% for the punishment motive at a level of $p < 0.001$ implies that the employees reacted negatively when they perceived that the managers are using perception appraisal as a punishment mechanism and consequently their commitment toward the organizations is reduced.

Table 7 illustrates the impact of POPAP on the turnover intention of the employees. The results show that the employees tend to quit their job when they apprehend any kind of reprimanding attitude of their supervisors exhibited through the performance appraisal process. Equally, the employees' POPAP in terms of the motivational motive restrains their turnover intention. However, regression value of 14.1% at $p < 0.01$ for the punishment motive, and 5.5% at $p < 0.05$ for the motivational motive imply that the employees are sensitive to negative attitudes of the managers regarding the performance appraisal, rather than any positive political stance thereof.

FINDINGS AND INTERPRETATIONS OF SUB GROUP ANALYSIS

In order to facilitate the discussion, sub group analysis was conducted based on the gender, age, type of employees, and experience (in years).

At first, *t*-test was conducted to see whether employees' POPAP for motivational

Table 7: Results of Step-Wise Regression with Turnover Intention as Dependent Variable

Steps of Regression	B	SE B	β	R^2	ΔR^2
Step One	–	–	–	0.141	–
EPOPAP for Punishment Motive	0.460	0.141	0.376**	–	–
Step Two	–	–	–	0.196	–
EPOPAP for Punishment Motive	0.585	0.150	0.479***	–	–
EPOPAP for Motivational Motive	–0.349	0.167	–0.256*	–	0.055

Note: N = 67; *p < 0.05, **p < 0.01, ***p < 0.001.

motive, punishment motive, satisfaction and commitment level and turnover intention differs based on their gender. No significant difference was observed between male and female in this regard (Table 8).

Then, ANOVA was employed to see whether employees' of different age opine differently in regard to POPAP for motivational motive, punishment motive, satisfaction and commitment level, and

Table 8: Summary of the Findings from *t*-test

Factors	Gender	M	SD	*t*-test Findings
Job Satisfaction	Male	3.7491	0.6303	No significant difference exists.
	Female	3.7312	0.5164	
Organizational Commitment	Male	3.6877	0.8144	No significant difference exists.
	Female	3.7143	0.8872	
Turnover Intention	Male	2.7514	1.2573	No significant difference exists
	Female	3.1667	1.1684	
EPOPAP for Motivational Motive	Male	3.5567	0.9345	No significant difference exists.
	Female	3.9427	0.6886	
EPOPAP for Punishment Motive	Male	3.5195	1.0577	No significant difference exists.
	Female	3.7292	0.6839	

Table 9: Summary of the findings from ANOVA—Age Factors

Factors	Age	M	SD	Findings
Job Satisfaction	20-30	3.7177	0.6262	No significant difference exists.
	30-40	3.8431	0.6183	
	40-50	3.8704	0.5041	
Organizational Commitment	20-30	3.6401	0.7868	No significant difference exists.
	30-40	3.7143	0.9651	
	40-50	4.4762	0.2974	
Turnover Intention	20-30	2.8333	1.2145	No significant difference exists.
	30-40	2.8333	1.2910	
	40-50	2.1111	1.9245	
EPOPAP for Motivational Motive	20-30	3.6228	0.8671	No significant difference exists.
	30-40	3.3854	1.1437	
	40-50	4.1250	0.6614	
EPOPAP for Punishment Motive	20-30	3.5734	0.9384	No significant difference exists.
	30-40	3.2361	1.3266	
Job Satisfaction	40-50	4.2778	0.8389	

turnover intention. However, no significant difference was found thereof (Table 9).

Nevertheless, significant differences in opinion exist in several cases among the employees when they are classified based on their job positions. The result of ANOVA in Table 10 extracts the findings.

Further, significant differences in opinion are also found among the

Table 10: Summary of the Findings from ANOVA—Type of Employees

Factors	Employee Type	M	SD	Findings
Job Satisfaction	Manager of manager	4.0533	0.4625	Significant difference in opinion of Executive exists with manager of a unit ($p < 0.01$) and Manager of managers ($p < 0.05$).
	Manager of a unit	4.0179	0.3699	
	Supervisor	3.6474	0.5405	
	Executive	3.4734	0.7472	
	Contractual	4.0000	0.3849	
Organizational Commitment	Manager of manager	4.2000	0.5396	Executives' opinion differs significantly from manager of a unit ($p < 0.05$) and Manager of managers ($p < 0.01$). Significant difference also exists between Manager of managers and Supervisor ($p < 0.05$).
	Manager of a unit	4.0000	0.6872	
	Supervisor	3.5536	0.8129	
	Executive	3.3540	0.8784	
	Contractual	3.7619	0.6751	
Turnover Intention	Manager of manager	2.0000	1.1967	Executives' opinion differs significantly from Manager of managers ($p < 0.01$), manager of a unit ($p < 0.05$) and Supervisor ($p < 0.05$).
	Manager of a unit	2.4889	1.1943	
	Supervisor	2.6667	1.2413	
	Executive	3.4348	1.1301	
	Contractual	2.8889	0.6939	
EPOPAP for Motivational Motive	Manager of manager	4.2482	0.5901	Significant difference in opinion of Supervisor exists with Manager of managers ($p < 0.01$) and manager of a unit ($p < 0.05$). In Addition, Executives' opinion differs significantly with Manager of managers ($p < 0.05$).
	Manager of a unit	3.7833	0.8298	
	Supervisor	3.1287	1.0396	
	Executive	3.5096	0.8376	
	Contractual	3.7917	1.0104	
EPOPAP for Punishment Motive	Manager of manager	3.7167	0.9265	No significant difference exists between groups.
	Manager of a unit	3.1222	1.0699	
	Supervisor	3.4406	0.9874	
	Executive	3.7942	0.9954	
	Contractual	3.7222	1.3472	

Table 11: Summary of the Findings from ANOVA—Job Experience

Factors	Years	M	SD	Findings
Job Satisfaction	0 -2	3.6852	0.6691	Significant difference in opinion between employees with 0-2 years and 4-6 years of experience exists at a level of $p < 0.05$.
	2 -4	3.6146	0.5364	
	4-6	4.1167	0.5215	
	6 and above	3.7974	0.3299	
Organizational Commitment	0-2	3.6007	0.8029	Opinion of employees with 2-4 years and 6 & above differs significantly at a level of $p < 0.05$.
	2 -4	3.4405	0.9736	
	4 -6	4.0143	0.7013	
	6 and above	4.2381	0.3798	
Turnover Intention	0 -2	2.9744	1.2713	No significant difference exists between groups.
	2-4	2.7500	1.2563	
	4 -6	2.3000	1.1380	
	6 and above	2.6111	1.2722	
EPOPAP for Motivational Motive	0-2	3.6537	0.8325	Opinion of employees with experience of 6 & above years differs significantly with the employees having 2-4 and 4-6 years of experience.
	2-4	3.2202	1.1117	
	4-6	3.4125	0.9318	
	6 and above	4.3542	0.5778	
EPOPAP for Punishment Motive	0-2	3.6940	0.9970	No significant difference exists between groups.
	2 -4	3.2431	1.0633	
	4 -6	3.4667	1.1675	
	6 and above	3.3056	0.8526	

employees having different level of experience. Table 11 summarizes the findings.

DISCUSSION OF THE RESULTS

Three terms should get more focus in this discussion: performance, appraisal, and politics. Certainly the term performance, has to be classified. Here the difference between traditional and recent view are also seem. Corporate profit making activity, if highly regarded as good performance, then value creation activity certainly having long run view, gets shadowed. Such a misleading perception might hamper what we call appraisal. This misled appraisal might be seen negatively resulting in the perception of politics. Then POPAP appears. Certainly performance is a relative issue without having a predetermined benchmark all the time. This creates confusion over what to achieve, i.e., what conforms to good performance. An employee progressing at 10% rate certainly expects s/he is doing well. Whereas, another one might do a threefold progress. Now, the question is how come the first employee would know that s/he has to excel the speed of progression. This is what has been found through the sub-group analysis. Employees' in managerial role have a quite opposite view from the executives and others in most of the cases, especially in EPOPAP for motivational motive. Quarterly/semi-annual review of performance and communication thereof might prove to be fruitful in resolving such situation failing which the same reoccurs.

The sample is dominated by young employees, who just started their career. Apparently it seems there is a problem of person-job match as they are largely dissatisfied with their job. However, a closer look into the issue brings more interesting scenario in front. The corporate Bangladesh is at a cross road. More people with background of BBA and MBA are coming out as never before. They are equipped with newer techniques and ideas and motivation to do something exceptional so that they can achieve an exceptional career growth. "When their (executives with training in business administration) value creation aptitude faces obstacles from the traditional management approach (management by standardizations) of the senior managers (who mostly did not receive degrees in business administration such as BBA and MBA), conflicts of interests between the managers and employees may ensue." Another important aspect in this context is 'expectation'. Do they expect more? Is their expectation irrational? The answer to such query can help in solving the problem. The findings of the study should not be taken as conclusive not because the sample size is smaller, but since it creates a new avenue of research: to what extent the expectation of new employees, be it work environment, salary, benefits, performance appraisal or even the work itself, hampers the sense of job satisfaction in them. Since performance appraisal to a certain extent is a subjective matter, there is a scope of manipulation, misjudgment, and/or misinterpretation. Face to face discussion during appraisal might reduce such gaps arising from misinterpretation.

Mainly, two parties are being studied in this research: the one who perceives and the one who is being perceived. The relationship between these two ends up either with sweet or bad memories. At the end of the day, this is what business is: 'relationship'. The relationship to sustain needs communication. And it has to be regular. The impact of these two variables, namely relationship between supervisors and supervisee and communication thereof, in this model might extract insightful findings and thereby clarify the existing conflicts. Otherwise, the person being perceived will be the scapegoat all the time. More importantly, the problem will persist.

CONCLUSION

In short, the current study confirms all the hypotheses and explains that the employees' POPAP for the punishment motive significantly reduces the employees' job satisfaction and organizational commitment, and encourages them to quit the organizations. Conversely, the employees' POPAP for the motivational motive, increases the job satisfaction and organizational commitment, and reduces the turnover intention of the employees. These findings signify that the employees favor those kinds of performance appraisal politics that benefit them.

The findings of this study can help the managers and the strategic decision makers of the organizations to make informed decisions. The supervisors need to avoid abusing their power for manipulating the employees' performance appraisal in order to achieve their own political gains. Because, this policy creates discords among the employees in the organizations and leads to intractable conflicts among the subordinates and the supervisors, which impediments the goals achievements of the organizations in the long run. Notably, the aggrieved employees in retaliation try to sabotage the organizational work environment. The management needs to introduce and encourage the open communication system to ensure free transmission of ideas. This will satisfy the intrinsic requirements of the employees and the supervisors will be dissuaded from abusing their administrative power. In addition, the appraisal system needs to be monitored on a regular basis, and the employees should be encouraged to provide feedback on the system.

LIMITATIONS AND FUTURE DIRECTION

The current study is not a conclusive one. It has considered only a few work outcomes of the employees' perceptions of organizational politics. Besides, its sample size is of relatively young population; any future study on the professional managers with longer work experiences may lead to more acceptable findings. Future studies should address these limitations and consider the other variables such as the employees' anxiety, stress, loyalty, etc., with the moderating effect of demographic variables like age, gender, type of employment (part time, contractual, and full time). The mediating affect of the job satisfaction also needs to be included in the future studies.

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An Empirical Study on the Impact of Supplier Performance on Organizational Performance: A Supply Chain Perspective

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Supply chain management is the latest phenomenon in the present business world. Efforts are being made to integrate the various players into one performing unit. Suppliers and customers are being brought into planning and problem-solving activities of the firm. It is fast becoming imperative that all members of a supply chain should perform if they are to survive. This research paper is one of the first attempt of its kind to study the supply chain practices of small manufacturing firms. The objective is to find out the impact of supplier performance on the performance of the firms. The sample frame is small scale manufacturers (firms with less than 100 employees) listed with Coimbatore District Small Industries Association (CODISSIA). A simple random sample of 75 firms is selected from the source list of 792 firms. These firms were administered a structured questionnaire containing pre-validated scales to measure the supplier performance and organizational performance of firms. After the data were collected, the scales were purified using Corrected Item Total Correlation (CITC) values and reliability was tested using Cronbach's alpha. The resultant purified scales were then tested for convergent validity using PLS path modeling software (Visual PLS). Once the constructs were found to be both reliable and valid, the impact of supplier performance on organizational performance was tested using bootstrapping method. The supplier performance was found to have a significant impact on the performance of the firm.

INTRODUCTION

Supply chain initiatives over the last decade, while frustrating at times, have proved enormously beneficial to businesses; the most successful innovators viewed supply chain as a strategic tool for changing the rules of the game (Anderson and Narus, 1990). As a result, supply chain management and shareholder value are closely linked, and supply chain management continues to play a major role in corporate success.

Barratt (2004) defines supply chain as network of facilities and distribution

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options that performs functions like procurement of materials, transformation of these materials into intermediate and finished products, and distribution of these finished products to customers. Balsmeier and Voisin (1996) state that supply chains exist in both service and manufacturing organizations, although the complexity of the chain may vary greatly from industry to industry, and from firm to firm.

In the 1990s, business leaders were inundated with new supply chain initiatives—from just-in-time inventory management to collaborative product commerce (Anderson and Narus, 1990). Most of these programs were well-conceived, but their complexity and misalignment with corporate operating models often produced conflicts, delays, and suboptimal results. At other times, competing or overlapping agendas led to inflated budgets and project terminations, leaving executives exhausted and discouraged.

During the same decade, however, supply chain programs saved thousands of companies' billions of dollars. Successful initiatives have made it possible for companies to meet customer needs more quickly, less expensively, and through more channels, providing better-quality, more reliable goods that reach the market sooner. And for the first time, mass-customized products and services became a reality (Anderson and Narus, 1990).

Davis (1993) explains that in today's ultra competitive world of short product life cycles, complex corporate joint ventures, and stiffening requirements of customers, it becomes necessary to consider the complete scope of supply chain management in the manufacturing sector. He further adds that successful businesses will need better visibility into their supply chains; they must better be at collaborating with suppliers to meet customer demands. Suppliers will be asked to react quickly to changes in the business environment and perform at levels higher than ever before.

Therefore to achieve optimal performance levels, manufacturers and distributors must have applications to help them communicate and collaborate efficiently, across the entire supply chain. Industries like electronics—with fragmented supplier communities and outsourced manufacturing—need supply chain applications that provide better visibility over the multi-tiered supply chain operations. Right now, this is not being managed efficiently; research firms estimate that there are trillions of dollars lost due to supply chain inefficiencies (Banfield, 1999).

> A supply chain consists of all stages involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers and customers themselves.

The above definition of supply chain given by Chopra and Meindl (2001) gives a good explanation of what a supply chain is. According to it, research defines supply chain as the chain of suppliers, manufacturers, wholesalers, distributors and stores that enable a product to be made, sold and delivered to the end user.

Very little research has been done in India on the impact of supply chain principles on organization's performance. Most of the worldwide studies have considered very large firms. This has left a gap in the studies done on small manufacturing sector in India. Most studies have focused on metrics and individual performance issues of firms. There has hardly been any research aimed at building and validating theoretical models in India with regard to small manufacturing firms. It is essential to validate supply chain concepts with small manufacturing firms as well, if supply chain theories are to be generalized.

The research work was conducted in South India considering small manu-facturing firms registered with Coimbatore District Small Industries Association (CODISSIA). Only manu-facturing firms with less than 100 employees were considered. The research was confined to supply chain issues of individual companies only and not the entire supply chain from end to end. All types of small manufacturing firms have been considered in this study.

LITERATURE REVIEW

SUPPLIER PERFORMANCE

The supplier performance refers to the ability of suppliers to deliver raw materials to the firm on time and in good condition (Beamon, 1998). A few committed suppliers will ensure that the supply is on time. This will increase the capability of the firm to meet customer expectations correctly, enabling a better performance in the marketplace (Davis, 1993; Levy, 1997; Tan *et al.*, 1998; Vonderembse and Tracey, 1999; and Shin *et al.*, 2000). Inconsistent performance by the suppliers will result in accumulating inventories across the supply chain (Shin *et al.*, 2000). An involved supplier will enable the firm to reduce its costs in a collaborative manner, thus increasing the margins of the firm (Shin *et al.*, 2000).

ORGANIZATIONAL PERFORMANCE

The performance of an organization is reflected in its presence in the marketplace and its profit generation over time (Yamin *et al.*, 1999). In the shorter time horizon, performance considers operational functions like productivity and efficiency. In the longer horizon however, performance means higher market share and greater profits for every one in the supply chain (Tan *et al.*, 1998). Organizational performance is measured in six dimensions: (1) Return on Investment (ROI); (2) Market share; (3) The growth of ROI; (4) Sales; (5) Profit margin on sales; and (6) Overall competitive position (Vickery *et al.*, 1999; and Stock *et al.*, 2000). These are measured on a five-point scale as financial information is considered sensitive by most of the firms and not divulged to outsiders. The five-point scale aims to measure the change in the status of the above-mentioned dimensions over a five-year period to judge the impact of supply chain practices (if any) on the organizational performance.

THEORETICAL FRAMEWORK AND HYPOTHESIS

Earlier studies have shown the impact of strategic supplier partnership on organizational performance (Vivek and Sudharani, 2007), and the impact of information quality on organizational performance (Cipriano, 1995; and Vivek *et al.*, 2009). Supplier partnerships have a positive impact on the performance of suppliers (Duffy, 2002; and Rachel and Andrew, 2004). The supplier performance has a direct bearing on the costs of the organization (Cannon and Homburg, 2001). The suppliers of a firm decide its ability to respond to changes and challenges in the marketplace. It enables a firm to assess its own manufacturing capabilities and plan accordingly. It enables firms to be reliable in giving and meeting deadlines to customers. This ensures a sustained performance of the firm in the marketplace. If the suppliers maintain a high level of performance, the organization will also perform better (Heide and Stump, 1995). This leads us to the following hypothesis:

H_1: *The better the supplier performance of a firm, the better will be the performance of the firm.*

DATA COLLECTION AND INSTRUMENT ADMINISTERED

The instrument consists of two constructs, supplier performance and organizational performance.

The supplier performance and organizational performance constructs are measured using an already validated instrument developed by Tracey *et al.* (1999) and Suhong (2002), respectively.

A list of manufacturing firms was obtained from CODISSIA. Companies with less than 100 employees were considered. The resultant list contained 792 firms. A random sample of 75 firms was requested to fill in the questionnaire.

ANALYSIS AND METHODOLOGY

After data collection, the scales are analyzed to achieve the following objectives: purification of scales, reliability of scales, unidimensionality of scales and validity of the scales. Purification is done using Corrected Item Total Correlation (CITC), reliability is tested using Cronbach's alpha, validity and unidimensionality are tested using PLS path modeling.

Before any type of factor analysis is done (Exploratory Factor Analysis, EFA or Confirmatory Factor Analysis, CFA), it is essential to purify the measuring instruments of variables that do not correlate to the constructs (Churchill, 1979). Purification is carried out by inspecting the CITC values of each variable with respect to the construct to which it belongs. CITC indicates whether the variable actually belongs to the construct or not. Variables showing scores lower then 0.5 are deleted, unless there is a compelling reason to keep them in the construct. Some items with CITC values over 0.5 can also be removed if the overall reliability of the construct in question improves as a result of the deletion (obtained by checking the 'alpha if deleted' scores).

Reliability of constructs refers to the accuracy with which the constructs repeatedly measure the same phenomenon without much variation. The reliability of each construct in question is examined using Cronbach's alpha (Cronbach, 1951). An alpha score larger than 0.7 is generally acceptable as sufficient accuracy for a construct (Nunnally, 1978). After purifying the constructs one by one, we arrive at the purified scales for the constructs, each of which is sufficiently reliable.

Unidimensionality is a common trait exhibited by all the indicator variables of any given construct (McDonald, 1981; and Hattie, 1985). Unidimensionality is best measured by CFA. A combination of CFA and path analysis is structural equation modeling. This is the best method of measuring the unidimensionality of any construct. In this research we use structural equation modeling to test the unidimensionality of the constructs. There are two approaches to structural equation modeling—covariance methods and PLS path modeling. Covariance methods make rigid assumptions about the distribution of variables (multivariate normality) and the sample size (at least 200). Another criterion is the degrees of freedom, which means that each construct should have at least three indicators for it to be identified. This makes them unsuitable for use in this research. The PLS methods, on the other hand, are nonparametric in nature. They do not make any assumptions about the distribution of the data, and the sample size needed for model validation and testing (5-10 times the largest number of indicators/construct in the model) is much smaller. The convergent validity of each construct is checked by examining the 'Average Variance Extracted' (AVE) values. Constructs which have AVE values greater than 0.5 are said to have convergent validity or unidimensionality. In some cases, values up to 0.4 are also considered if they are central to the model (Chin, 1995 and 1998; Chin and Newsted, 1999; and Chin *et al.*, 2003). Discriminant validity of constructs is ascertained by comparing the AVE scores of the two constructs with the square of the correlation between the two constructs. If both the AVE values are larger than the square of the correlation, the constructs can be considered to show discriminant validity (Fornell and Larcker, 1981).

The following section presents the large-scale validation results on each of the constructs—supplier performance and organizational performance. For each construct the instrument assessment methodology described above has been applied.

RESULTS

SUPPLIER PERFORMANCE

The supplier performance construct is purified using the CITC values (shown in Table 1). All the indicators have CITC values larger than 0.5, so no indicators are removed from the analysis. The reliability score of 0.9383 indicates excellent reliability of the construct.

Table 1: Supplier Performance	
	CITC 1
Our Suppliers,	
Deliver materials/components/ products to us on time	0.8664
Provide dependable delivery to us	0.8268
Provide high quality materials /component /products to us	0.9305
Cronbach's Alpha	0.9383

The unidimensionality of the construct is measured using Visual PLS software. The AVE value of 0.857835 (shown in Table 5) indicates good convergent validity and hence unidimensionality.

ORGANIZATIONAL PERFORMANCE

The organizational performance construct is also purified using CITC values (shown in Table 2). After purification the construct is left with seven indicators out of eight, assumed initially. The indicator that does not fit the group is 'creditor days'. This could be due to the fact that most small firms are prompt in paying their creditors. Some are operating on a cash and carry basis as large suppliers are not willing to give credit to these firms. The overall reliability score of the construct is 0.9547, showing a good reliability of the construct. The unidimensionality of the construct is measured in Visual PLS. The AVE score of 0.816186 (shown in Table 3) indicates a good convergent validity and hence unidimensionality.

Table 2: Organizational Performance		
	CITC 1	CITC 2
Market Share	0.8973	0.949
Return on Investment	0.8973	0.949
The Growth of Market Share	0.8973	0.949
The Growth of Sales	0.8985	0.9498
Profit Margin on Sales	0.6535	0.6716
Inventory	0.8865	0.8868
Debtors Days	0.5818	0.7384
Creditor Days	–0.2632	–
Cronbach's Alpha	0.8184	0.9547

Table 3: Validity of Constructs (AVE Scores)	
Construct	**AVE**
Supplier Performance	0.857835
Organizational Performance	0.816186

The AVE scores of both the constructs are greater than the square of the correlation between the constructs (0.266). Hence, they exhibit discriminant validity.

CAUSAL MODEL AND HYPOTHESIS TESTING

The causal effect of strategic supplier partnership on the performance of the firms is tested using Visual PLS path modeling software. A rigorous test of the significance of various proposed relations can be tested using the bootstrap function in Visual PLS. PLS path modeling is a nonparametric method, and as such cannot be used for performing a *t*-test. But it is possible to use resampling methods (bootstrap and jack knife) to obtain the significance of the various paths in the model. Bootstrap is more reliable in estimating the significance of paths (Chin, 1995). So, this research has considered and used bootstrap for the purpose of determining causal relations proposed in the model. In the bootstrap used in this research, random samples comprising 75 respondents were taken, and 500 such samples were taken into consideration (to get the best estimates, a resample number of 500 is recommended although in theory an infinite resample is needed for the purpose). The results were examined for significance. At 5% level of significance the cutoff *t*-statistic is 1.96. In general, we assume that if the *t*-statistic is more than two, the path is significant.

H_1: *The better the supplier performance of a firm, the better will be the performance of the firm.*

The hypothesis was found to be highly significant (beta = 0.516, t = 8.328). This proves our presumption that supplier performance of a firm has an impact on the performance of the firm. A low R^2 value of 0.266 indicates that supplier performance is not a major influencer of the organization's performance (see Figure 1). There are other variables like customer satisfaction, lean practices, information flows, etc., that could significantly affect the performance of an organization.

Figure 1: Structural Equation Model

CONCLUSION

This research paper tested the reliability and validity of two constructs—supplier performance and organizational performance. It also tested the impact of supplier performance on organizational performance. The constructs were found to be both reliable and valid. The suppliers' performance was found to influence organizational performance significantly, though the amount of influence was not very strong ($R^2 = 0.266$). This could be due to the fact that other variables like customer satisfaction, lean practices, information flows, etc., also influence the organizational performance. This can be a topic for further research by researchers. As the impact of the performance of the suppliers on the performance of the organization is significant even for small manufacturing firms, the importance of ensuring good supplier performance is the responsibility of all firms, irrespective of their size. Timely and dependable delivery, and quality of supplies is critical to sustained performance that is achieved by influencing the market share, profitability, debtor position, profit margin, return on investment and inventory position of the firm. This implies that the theory of supplier performance impact on organizations can be generalized to encompass all sizes and categories of manufacturing firms. This implies that all firms need to take the following steps with regard to their suppliers:

- Work towards ensuring punctuality in each delivery. This is best done on a mutual basis by sharing information on capacities, available free slots, transport reliability, joint planning efforts, etc.
- Work towards better dependability in each delivery. The reliability of each delivery is best assured by standardizing the various variables of

delivery like time, order size, order quantity, ordering interval, etc.

- Work towards ensuring required quality in each delivery. This is best accomplished by eliminating the various causes of variation that affect the previous points. Various quality experts like Deming, Juran, Crosby, etc., have given time tested principles of quality management. These principles will definitely provide a long-term competitive advantage to any firm, thus making them profitable in the long run. This is probably the most significant message to all firms, especially the small manufacturing firms.

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Do Consumers Respond Differently to Advertising Stimuli: An Empirical Study

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The intensifying market competition has led companies to struggle more for attracting and retaining customers. The customers are bombarded with increased number of commercials through different channels. But the customer's capacity to process information is limited and they can't pay equal attention to all advertisements. The demographic factors also make the differential attention and attitude towards the advertisements shown. This study is an attempt to understand the differences in response that consumers show towards advertising stimuli.

INTRODUCTION

Demographics and product attributes are the mostly widely used variables for segmenting the market, with demographic categories used to match segments with media profiles, mainly because most media described their audiences by demographics. Although recent research has identified new bases for segmentation, including lifestyles, benefits, etc., profiling of target audiences by the media has changed very little. Media reach and pricing continue to be based on the demographic characteristics of the targets, and thus demographics continues to play an influential role. However, although the demographic profile of consumers in many markets has changed considerably over time, research into demographic factors appears to have waned in favor of more 'exotic' variables.

In everyday experiences, customers are exposed to a variety of advertising appeals. These appeals are aimed at influencing the customer's attitude towards a wide range of products and services. Through television, radio, and the Internet, they reach a large number of individuals who represent a wide range of cultural and ethnic backgrounds. But to what extent these appeals are able to influence consumers belonging to different demographic profiles is to be seen. Investigation of the literature identified some interesting imbalances. The majority of papers investigating demographic influences in advertising were found to focus on gender, and only a few considered other demographic variables. The present paper addresses the effect of different demographic profiles like gender, age, education and profession on differences in response to advertising stimuli.

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LITERATURE REVIEW

In recent years, researchers (Abraham and Lodish, 1990; and Lodish *et al.*, 1995) have found that much of the advertisements expenditure is getting wasted in ineffective campaigns. Various guiding advertising models like Attention→Interest→Desire→Action (AIDA) (String, 1925), CEA (Cognition→Experience→Affect) framework (Vakratsas and Ambler, 1999) etc., are available but the real outcome of advertisement in terms of converted sales is much far reaching. For frequently purchased packaged goods like soft drinks, the consumers' mind is not a blank sheet awaiting advertisement but rather already contains conscious and unconscious memory of product purchase and usage (Vakratsas and Ambler, 1999). Individual responses to advertising are mediated by factors such as motivation and ability to process information (Cacioppo and Petty, 1985; and MacInnis and Jaworski, 1989) and attitude towards the advertisement (Mackenzie *et al.*, 1986). These mediating factors can critically change the response to advertising. The mediating factors affecting consumer purchase decision are shaped by various demographic variables and an understanding of customer demographics is a critical issue for advertisers because it enables them to identify and target their communications to those consumers who are most likely to purchase. With the changing socio-cultural environment, the roles and responsibilities of different customers during different stages of their lifecycle are changing. Even the functional transition is happening between different genders and age groups. Men, for example, do nearly 30% of the laundry in the US and yet advertisements retain a strongly female orientation (Sandor, 1994). Several studies have shown that men and women differ significantly on how they process marketing information. In general, women have been found to process information in more detail, resulting in a greater sensitivity to environmental factors (Meyers-Levy and Maheswaran, 1991; and Meyers-Levy and Sternthal, 1991). Since they are more detailed information processors, women are more likely to be affected by negative information than men because of its higher diagnosticity (Dube and Morgan, 1996). Traditionally, researchers studying market segmentation have used a working/nonworking dichotomy in assessing the impact of occupational status on purchasing behavior, and have limited their studies to females (Joyce and Guiltinan, 1978; and Eastlick and Feinberg, 1994). Researchers who studied professional women as a market segment confirmed that these consumers are significantly different from nonprofessional women and from homemakers in terms of a variety of shopping attitudes, activities, and behaviors (Joyce and Guiltinan, 1978; Hirschman, 1981; Bartos, 1982; and Cassill, 1986). Shim (1996) found that teenage boys are more utilitarian, whereas teenage girls are more social/conspicuous conscious. Another research shows that men see shopping as being unpleasant and undesirable (Dholokia, 1999), spend less time shopping than women and generally do not take responsibility for food and clothing purchases (Miller, 1998), are less interested in clothing and fashion (Cox and Dittmer, 1995), show a weaker sensitivity to the opinions of their friends (Shoaf *et al*., 1995), make quick/careless decisions more commonly (Campbell, 1997), and are more independent, confident, externally motivated, competitive, and more willing to take risks especially with money (Areni and Kiecker, 1993; and Prince, 1993).

Darley and Smith (1995) identified that men and women process advertising messages differently, with females being more sensitive to the level of product risk than males. Women respond more positively to a contemporary representation of female roles in advertising—as opposed to traditional role depiction (Leigh *et al*., 1987; Jaffe, 1989 and 1991; and Jaffe and Berger, 1994). Bellizzi and Milner (1991) examined the responses of men and women to advertisements which were purposefully designed to be male and female-oriented and identified that the use of female-oriented advertisements can create a positive effect among women, without creating a male backlash. However, Alreck (1994) conversely found that, while women will accept advertisements for masculine-gendered brands, men will reject feminine gendered brands.

Gender, however, is not the only important demographic factor, yet other demographic categories appear to receive scant attention in the marketing communications literature. According to Moschis (1987), with increasing age, consumers are less able to integrate information, less sensitive to external stimuli (light, colors), and less able to make distinctions between stimuli. A relevant study by Zaltman *et al*. (1978) found that as age increases, consumers' awareness of unfair (and possibly irritating) marketing practices (e.g., being pressured to buy a product, advertising items not in the store) and propensity to complain decrease. Education and employment status seem to influence the amount of retail shopping performed by family members (Kirjavainen and Barclay, 1990); and age and gender appear to affect the amount of impulse purchasing in relation to planned purchasing (Cobb and Hoyer, 1986). Further, researchers have found income, education, socio-economic status, and mobility to be related to consumers' propensities to purchases (Peters and Ford, 1972; and Berkowitz *et al*., 1979).

While different consumers belonging to different demographic profiles may consume the same product for the same reasons and so be part of the same need-based segment but literature review has established that their marketing communications needs are different. These implications appear to be confirmed further by the lack of investigation into understanding responses of different demographic categories to the different advertising stimuli. In the backdrop of the literature reviewed the following hypothesis are put to test:

H_1: *People do not differ in their general perception towards advertisements when they belong to different gender.*

H_2: *People do not differ in their general perception towards advertisements when they belong to different age groups.*

H_3: *People do not differ in their general perception towards advertisements when they belong to different marital status.*

H_4: *People do not differ in their general perception towards advertisements when they belong to different profession.*

RESEARCH DESIGN

As the study was explorative in nature, we have collected primary data using a structured questionnaire. The time frame of the study was 12 months to take care of seasonality and the respondents belonging to different demographic groups like gender, education level, marital status and profession were considered in the study. The respondents included in the study had a previous exposure to advertisements of soft drinks on television. For the selection of respondents, a simple random sampling procedure was adopted. For data collection, questionnaires were filled by the respondents from National Capital Region (NCR) (India) following personal interview technique. The total number of respondents interviewed were 1,200. The responses received were 1,123 (93.5%) and the questionnaire in the usable form was 1,039 (86.58%). So the effective sample size of the study was 1,039.

For collection of data utmost care was taken. It was clarified that the data collection was for academic purposes only and not for any commercial purpose so that the respondents could feel free in stating their true opinions. While approaching respondents it was ensured that the time of data collection was convenient to them and it did not interfere with their normal schedule. Though a blank space for giving name was included in the questionnaire, respondents were told that giving name was optional. This was done to emphasize the point that individual's identity did not matter in the study, what was important was to obtain their true and honest responses.

DATA COLLECTION INSTRUMENT

Extensive literature review on demographic factors affecting response towards advertising stimuli along with established advertising-attitude scales were considered for designing the questionnaire. While defining the problem, environmental context of the problem was also considered. From a review of articles, references relating to demographic profiles and advertising stimuli from secondary literature and variables were initially identified. For construction of scale for measurement of response to advertisement stimuli, different models proposed by researchers over a period of time were considered. The AIDA model (Strong, 1925) had proposed the four steps (AIDA) of consumer purchase decision distributed over three stages (Cognitive Stage→Affective Stage→ Behavioral Stage). Lavidge and Steiner (1961) proposed hierarchy of effect model and added two more steps in consumer purchase decision process and proposed six steps (Awareness→Knowledge →Liking→Preference→Conviction→Purchase) distributed over three stages (Cognitive Stage→Affective Stage→ Behavioral Stage). The Innovation-Adoption Model

(Rogers, 1962) further modified the consumer purchase decision process and proposed five steps (Awareness →Interest→Evaluation→Trial→Adoption) of consumer purchase decision distributed over three stages (Cognitive Stage→Affective Stage→Behavioral Stage). The scale used for measuring the customer response to advertising stimuli in this study was a combination of the important steps proposed by Strong, Lavidge, Steiner, and Rogers. The items of scale used in this study were:

- Advertisements arouse attraction/ attention;
- Advertisements arouse interest;
- Advertisements arouse desire;
- Advertisements trigger to purchase;
- Advertisements help in reassuring continuous patronage; and
- Advertisements help in comparing available options.

Further analysis, however (comparison of definitions, usage, examples and semantics) revealed a degree of similarity (different labels addressing the same variable), overlap (labels used to refer to multi-item constructs) or confusion (the same item being used for different variables). This content analysis eliminated most of the semantic variation but the list was reduced further via review and consultation with experts and via a small pilot test. The selected variables for the study was used to develop a self administered, closed ended questionnaire consisting of five point likert scale (1= strongly disagree, 5 = strongly agree). A pilot study was conducted to validate the questionnaire and the validated questionnaire was finally filled by the respondents. The data obtained through these questionnaires were applied with the technique of Mann-Whitney *U*-test, Kruskal Wallis *H*-test and Dunnet C-test, as the study demanded.

DATA VALIDATION

The designed questionnaire was put to content validity (face), construct validity (convergent and discriminant) and cross validity. As the variables under different dimensions are developed with the help of pertinent secondary and primary sources, it is implied that the questionnaire is appropriate for the task at hand and thus passes the test of face validity. The attributes have high correlation with the related constructs (loading in excess of 0.5) and low correlation with unrelated constructs (loading less then 0.4) and thus the questionnaire passes the test of convergent and discriminant validity. According to Kline (1986), croanbach coefficient alpha is the most efficient measure of reliability and should always be computed and it should always be greater than 0.7 when items are selected for test. So croanbach alpha reliability analysis was conducted for the items included in the study. The internal consistency—croanbach alpha value for reliability of the questionnaire was found to be 0.781. All items were well above the 0.70 level which was the commonly accepted threshold (DeVellis, 1991; Spector, 1992; Nunnally and Bernstein, 1994; and George and Mallery 2003).

All individual scale items had statistically significant (at $p < 0.05$ level) item-to-total correlations. Hence, all items are deemed reliable.

STATISTICAL ANALYSIS

Data obtained for differential response towards advertising stimuli were first analyzed for Kolmogorov-Smirnov test (Kolmogorov, 1933) for normality and homogeneity of variance by Levene's test (Levene, 1960). Due to lack of normality (Kolmogorov-Smirnov test) and homogeneity of variance (Levene's test), the data were analyzed with the help of Mann Whitney *U*-test (Mann Whitney, 1947) and Kruskal-Wallis *H*-test (Kruskal and Wallis, 1952). In cases where the result was significant, Dunnet C-test was performed. For all analysis SPSS version 15 was used.

RESPONDENTS PROFILE

As the study was explorative in nature, the sample of the study was non-probabilistic convenience sample comprising 1,039 respondents. Respondents from different parts of NCR were asked to fill in the questionnaire. The resulting sample was 55% female and 45% male. The demographic profile of the sample is given in Table 1.

Of the 1,041 respondents, 68.2% were less than 25 years of age. The maximum respondents were falling into this age group since youth is the target market for FMCG products (in this case soft drinks) and they are the ones who pay maximum attention to the advertisements. Out of the remaining sample, only 2.3% were above 55 years of age. Remaining 29.5% belonged to the age group of 26 to 55 years.

Table 1: Demographic Profile of Sample

Characteristic	Frequency	Percent
Age		
Under 25	710	68.2
26-35	122	11.7
36-45	108	10.4
46-55	75	7.2
55 and Above	24	2.3
Occupation		
Student	710	68.2
Businessman	69	6.6
Executive/Manager	80	7.7
Other	180	17.3
Gender		
Male	462	44.4
Female	577	55.4
Marital Status		
Married	264	25.4
Unmarried	775	74.4

The maximum respondents in profession category belong to student group with major share of 68.2% and the remaining all contributes 31.8% which includes businessmen, executives and others. The largest number of respondents were unmarried (74.4%) and the overall compositions of respondents included in the study were young, unmarried and students. Only in case of gender the population average was almost the same.

RESULTS

Effects of the demographic variables viz., age, gender, occupation and marital status, were tested using nonparametric tests. 'Gender' and 'Marital Status' were analyzed with the help of Mann-Whitney *U*-test (Tables 2 and 3 respectively) whereas Kruskal Wallis H-tests was used to analyze of demographic variable—age

Table 2: Mann-Whitney *U*-Test—Significance of Difference Between Male and Female in Their Response to Advertising Stimuli

	Gender	N	Mean Rank	Mann-Whitney *U*-test	Asymp. Sig. (2-tailed)
Advertisements Arouse Attraction/ Attention	M	462	547.67	121426.0	0.011
	F	577	499.44	–	–
Advertisements Arouse Interest	M	462	558.94	115295.500	0.000
	F	577	488.82	–	–
Advertisements Aarouse Desire	M	462	533.52	127040.500	0.175
	F	577	509.17	–	–
Advertisements Triggers to Purchase	M	462	504.74	126237.000	0.129
	F	577	532.22	–	–
Advertisements Helps in Reassuring the Continues Patronage	M	462	522.46	132152.000	0.805
	F	577	518.03	–	–
Advertisements Helps in Comparing Available Options	M	462	533.61	126998.000	0.178
	F	577	509.10	–	–

Table 3: Mann-Whitney *U*-Test—Significance of Difference Between Married and Unmarried in Their Response to Advertising Stimuli

	Marital Status	N	Mean Rank	Mann-Whitney *U*-test	Asymp. Sig. (2-tailed)
Advertisements Arouse Attraction/ Attention	M	264	576.26	87447.500	0.000
	U	775	500.84	–	–
Advertisements Arouse Interest	M	–	600.70	80996.500	0.000
	U	–	492.51	–	–
Advertisements Arouse Desire	M	–	570.17	89055.500	0.001
	U	–	502.91	–	–
Advertisements Triggers to Purchase	M	–	451.57	84234.000	0.000
	U	–	543.31	–	–
Advertisements Helps in Reassuring the Continues Patronage	M	–	542.34	96402.000	0.143
	U	–	512.39	–	–
Advertisements Helps in Comparing Available Options	M	–	571.55	88692.000	0.001
	U	–	502.44	–	–

and occupation (Tables 4 and 5 respectively). In case of demographic variable, age and occupation, where *P*-value of these pretests was below the 0.05 level, post hoc analysis was performed using Dunnet *C*-test to further buttress the source of significance.

The Mann-Whitney *U*-test (Table 2) shows that of the six types of responses consumers might develop for any advertising stimuli, the difference between the mean ranks of two responses, i.e., advertisements arouse attraction/ attention ($W = 121426.0$, $p < 0.05$) and advertisements arouse interest ($W = 115295.500$, $p < 0.05$) were found to be significant between male and female respondents under the study. Thus, null hypothesis was rejected in these two cases and in the case of the remaining four responses null hypothesis were accepted. So the rejected hypothesis shows that the male and female consumers differ in their level of attention paid and the amount of interest generated towards advertisement stimuli.

The Mann Whitney test (Table 3) for gauging differences in married and unmarried consumers towards advertising stimuli portrays a very interesting picture. The data obtained was significant for all responses except one and hence we can reject null hypothesis for all except the fact that advertisements help in reassuring continuous patronage in married and unmarried consumers. The rejected hypothesis revealed that married and unmarried consumers had different levels of attention, arousal, desire, inducement after watching the advertisement and felt differently for help advertisements provided in evaluating the available options.

One way ANOVA (Kruskal Wallis *H*-test) showed that consumers belonging to different age groups react differently to advertising stimuli and the difference in response was significant in case of three variables out of six variables (Table 4). The variables like advertisement arouse attraction ($H = 7.908$, $p > 0.005$), arouse desire ($H = 9.044$, $p > 0.005$) and helps in comparing available options ($H = 4.295$, $p > 0.005$) showed immunity to this impact. Thus null hypothesis for these variables are accepted in view of statistical evidence except in the case of the remaining three variables. The rejected hypothesis can be translated as—consumers belonging to different age groups have different perceptions of advertisements in terms of arousing interest, triggering to purchase and reassuring continuous patronage.

To look at the source of difference in case of different age groups, post hoc analysis was conducted using Dunnet *C*-test (Unequal variance) in respect of cases that reported the difference to be significant at 5% level.

As envisaged, the Post hoc Dunnet *C*-test (Table 5) reveals fine prints of the difference. Observation of the post hoc table revealed that among the four categories of age groups of respondents, only respondents under 25 years of age exhibited significant differences with other categories. Young respondents (less than 25 years) had a different level of arousal after watching advertisements and they showed a significant difference

Table 4: Kruskal Wallis *H*-Test—Significance of Difference Between Different Age Groups in Their Impact of Purchase Intent and Purchase Behavior

	Age Groups	N	Mean Rank	Chi-Square	Degree of Freedom	Asymp. Sig.
Advertisements Arouse Attraction/ Attention	Under 25	710	504.79	7.908	4	0.095
	26-35 Years	122	574.52	–	–	–
	36-45 Years	108	539.31	–	–	–
	46-55 Years	75	527.71	–	–	–
	56 and Over	24	581.92	–	–	–
Advertisements Arouse Interest	Under 25	710	493.43	25.495	4	0.000
	26-35 Years	122	597.39	–	–	–
	36-45 Years	108	611.48	–	–	–
	46-55 Years	75	510.64	–	–	–
	56 and Over	24	530.17	–	–	–
Advertisements Arouse Desire	Under 25	710	506.82	9.044	4	0.060
	26-35 Years	122	557.21	–	–	–
	36-45 Years	108	582.09	–	–	–
	46-55 Years	75	504.54	–	–	–
	56 and Over	24	489.69	–	–	–
Advertisements Triggers to Purchase	Under 25	710	535.18	25.265	4	0.000
	26-35 Years	122	431.55	–	–	–
	36-45 Years	108	471.84	–	–	–
	46-55 Years	75	612.23	–	–	–
	56 and Over	24	449.06	–	–	–
Advertisements Helps in Reassuring the Continues Patronage	Under 25	710	515.11	11.494	4	0.022
	26-35 Years	122	578.37	–	–	–
	36-45 Years	108	546.96	–	–	–
	46-55 Years	75	453.61	–	–	–
	56 and Over	24	454.08	–	–	–
Advertisements Helps in Comparing Available Options	Under 25	710	511.56	4.295	4	0.368
	26-35 Years	122	549.09	–	–	–
	36-45 Years	108	555.81	–	–	–
	46-55 Years	75	518.68	–	–	–
	56 and Over	24	464.83	–	–	–

with elder respondents in the age groups 26-35 years and 36-45 years. Also these young respondents (less than 25 years) had a different degree of inducement to purchase after watching advertisements and they showed significant difference with elder respondents in the age groups 26-35 years and 46-55 years.

One way ANOVA (Kruskal Wallis *H*-test) was also applied on data obtained

Table 5: Dunnet C-Post Hoc Analysis of the Sources of Significant Differences in Responses to Advertising Stimuli Among Respondents Belonging to Different Age Groups

Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)
Advertisements Arouse Interest	Under 25	26-35 Years	0.5181*
		36-45 Years	0.5937*
Advertisements Triggers to Purchase	Under 25	26-35 Years	0.5306*
		46-55 Years	0.9037*

Note: * The mean difference is significant at the 0.05 level.

from respondents belonging to different professions. Kruskal Wallis *H*-test showed that the impact of the profession on responses towards advertisement stimuli was significant in two cases (Table 6). The responses like advertisement arouse

Table 6: Kruskal Wallis *H*-Test—Significance of Difference Between Different Professions in Their Response Towards Advertising Stimuli

	Profession	N	Mean Rank	Chi-Square	Degree of Freedom	Asymp. Sig.
Advertisements Arouse Attraction/Attention	Student	710	508.60	3.927	3	0.269
	Businessman	69	538.84			
	Executive	80	528.73			
	Other	180	553.88			
Advertisements Arouse Interest	Student	710	495.49	19.752	3	0.000
	Businessman	69	608.66			
	Executive	80	521.53			
	Other	180	582.02			
Advertisements Arouse Desire	Student	710	502.53	8.861	3	0.031
	Businessman	69	541.46			
	Executive	80	546.98			
	Other	180	568.69			
Advertisements Triggers to Purchase	Student	710	531.09	3.364	3	0.339
	Businessman	69	490.12			
	Executive	80	503.95			
	Other	180	494.86			
Advertisements Helps in Reassuring the Continues Patronage	Student	710	519.28	1.091	3	0.779
	Businessman	69	553.11			
	Executive	80	517.04			
	Other	180	511.47			
Advertisements Helps in Comparing Available Options	Student	710	514.40	2.273	3	0.518
	Businessman	69	548.32			
	Executive	80	498.35			
	Other	180	540.87			

interest ($H = 19.752$, $p < 0.005$) and advertisement arouse desire ($H = 8.861$, $p < 0.005$) showed a difference in opinion between consumers belonging to different professions. Thus the null hypothesis was rejected in the case of these responses and for the remaining four responses the null hypothesis was accepted.

In this case also post hoc analysis was conducted using Dunnet C-test (unequal variance) in respect of cases that reported the difference to be significant at 5% level. The post hoc conducted using the Dunnet C-test (Table 7) explores the source of significance of difference in case of four categories of profession. The test was conducted in respect of two responses that exhibited significant differences.

Table 7 demonstrates that the major contribution to the significance of difference was due to student and other categories. Students showed difference of opinion with other consumers for both variables under investigation. Students and businessmen differ on the view that advertisement arouses interest in product advertised.

Table 7: Dunnet C-Post Hoc Analysis of the Sources of Significant Differences in Responses Towards Advertising Stimuli Among Respondents Belonging to Different Professions

Dependent Variable	(I) Profession	(J) Profession	Mean Difference (I-J)
Advertisements Arouse Interest	Student	Businessman	0.5843*
		Others	0.4645*
Advertisements Arouse Desire	Student	Others	0.3149*

Note: * The mean difference is significant at the 0.05 level.

with personal characteristics of consumers. The present findings confirm the theory proposed by Meyers *et al.* (1991) which envisages that men and women differ significantly in their way of processing information. The findings suggest that the difference is not limited to only level of attention paid to any information but also the interest generated for the advertised product is also different. The basic reason behind such differences may lie in the fact that the upbringing and lifestyle of male and female vary in the Indian context. The kind of social and cultural obligations envisaged with men and women in India are also different and these factors contribute to their outlook to any information offered. The difference in opinion and perception built in early age in any gender continues to dominate throughout the life of any customer. Even after marriage, the roles and responsibilities of men and women makes them stereotype in processing different kind of communication as has been indicated in the findings of this study. Contrary to the assumption made in the

FINDINGS AND CONCLUSION

With different tests applied on demographic factors, it was found that the response towards advertising stimuli varies study, marital status also impacts the level of attention, arousal, desire and inducement for an advertised product. The shift in roles and responsibilities before and after marriage changes the outlook of any customer. During a personal interview with some customers, it was revealed that the advertisement appeals impressing upon joy and thrill do not influence them anymore and they wish to see some more meaningful and concrete messages. The findings of the study confirms to Moschis (1987) proposition that the perception towards advertisements changes significantly in older age. The findings of the study confirms that the customers in their old age become more conservative and less interested in outside triggers while young customers want to experience more new things and enjoy watching advertisements. The result obtained on perceptual differences due to occupation brings forth the fact that customers interest as well desire is shaped by the profession also. The maximum variability was found in the perception of students with other categories of profession.

Not many advertisers in India routinely collect demographic data and response of customers belonging to different demographic profile towards their advertised products. Our findings indicate that it is useful to understand demographics which aids in assigning customers to different segments that differ in their response to the same advertised product. Once the segment membership is determined, the advertisers would know the relative importance of benefits in terms of perceptions of the segment members and thus can strategize advertisement techniques specifically for the target segment for enhancing the attractiveness of advertising stimuli.

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Case Study

Disinvestment of National Aluminium Company Limited (NALCO): A Public Sector Enterprise, Government of India

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Disinvestment, the major agenda of the economic reforms of the Government of India (GOI) since 1991, led a debate on the policy and its impact on stakeholders. Following its agenda, the GOI decided to disinvest the National Aluminium Company Limited (NALCO) during 2002-03 and 2005-06. This case highlights the decision to disinvest NALCO, the reaction of stakeholders and its implication, and outcomes. The first part describes the background and the case facts and the second part presents an analysis of the case and proposes the stakeholders' management in the disinvestment process.

Opposing the central Government's decision to divest 10% stake of the company, about 5,000 workers and officers of the National Aluminium Company Limited (NALCO), Angul, Orissa, went on a 24 h strike on June 23, 2006; shut the main entrance of the company's smelter and captive power plants. The strike costed approximately Rs. 150 mn.[1] On the next day, workers in mines at Danmanjodi joined the strike which adversely affected the mining operations. Consequently, all categories of employees, including officers and contract laborers, took part in the strike.

NALCO Mazdoor Sangha (Labor Union) president Somnath Mohapatra said:

> "If the Government does not reverse its decision, the agitation will intensify."[2]

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1 http://www.hindu.com/thehindu/holnus/002200606241422.htm Retrieved on June 26.

2 http://www.hindu.com/thehindu/holnus/002200606242168.htm Retrieved on June 26, 2006.

Further, NALCO-recognized land displaced people's Union President Krutibas Raju said:

> "We have decided to warn the Union government with this oneday token strike. If the decision of 10% disinvestment is not withdrawn, we will obviously be forced to decide more stringent action."[3]

However, a day after the strike NALCO's Executive Director U B Patnaik said:

> "Employees have joined their duties. Now as many as seven units in the power plant are in operation. All the units of smelter plant are running normally."[4]

Meanwhile, leaders of the seven trade unions including Central Industrial Trade Union (CITU), All India Trade Union Congress (AITUC), Indian National Trade Union Congress (INTUC), Hind Mazdoor Sangh (HMS), and Bharatiya Mazdoor Sabha (BMS) met to chalk out the future course of action to oppose the disinvestment decision of NALCO.

NATIONAL ALUMINIUM COMPANY LIMITED

The Government of India (GOI) incorporated NALCO in 1981, in the state of Orissa, with an objective to meet the domestic demand of Aluminium. It was done in technical collaboration with Aluminium Pechiney, France, Europe's largest metal products company. Eastern coast of India had large deposits of bauxite, which gave an impetus to NALCO's incorporation. The company was a turning point in the history of Indian aluminium industry. It not only addressed the need for self-sufficiency in aluminium, but also gave the country a technological edge in producing aluminium of high standards. NALCO was consistently reporting profit and high turnovers (Appendix 1 and 2).

Few players like NALCO, Hindustan Aluminium Company (HINDALCO) and Bharat Aluminium Company Ltd. (BALCO) dominated the Aluminium industry in India. NALCO was Asia's largest integrated complex consisting of 2,400,000 Tons Per Annum (TPA) Bauxite mine at Panchpatmali; 800,000 TPA Alumina refinery at Damanjodi; 218,000 TPA Aluminium smelter at Angul; 600 MW coal fired captive thermal power plant at Angul, and port facilities at Vishakapatnam, Andhra Pradesh (Appendix 3).

PRODUCTS

NALCO's product range consisted of aluminium ingots, sows, billets, wire rods, alloy wire rods, and cast strips. Its product mix was limited to alumina and primary aluminium in ingot, rod, and billet forms. The company was one of the largest exporters of calcined alumina and primary aluminium in India having markets reaching up to South East Asia, Far East, the Indian subcontinent, the Gulf, China, and the USA. All the excess alumina and 40% of the aluminium ingots were exported and the rest were sold in the domestic market.

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[3] *Ibid.*
[4] *Ibid.*

NALCO consisted of the most modern and advanced technology and its production was the second largest after the Hindustan Aluminum Corporation (HINDALCO). It had a history of consistently generating profits, which rested on its core strength of producing alumina from bauxite ore at the cheapest cost. The high quality of the products was due to the quality of the bauxite mines in Panchpatmali in Koraput district, Orissa.

LOGISTICAL ADVANTAGES

The transportation cost to the company was low as its refinery was close to the mines. It had its special wagons for transporting the alumina by rail to the smelter located at about 700 km, which helped in regular supply of coal. Additionally, the distance between the coal mines and the power plant was just 15 km, thus reducing the freight cost. It also had captive port facility, which helped in storage and ship handling facilities for the export of alumina and import of caustic soda and other raw materials. The transportation of ore to the refinery was virtually free due to a unique 14.6 km long conveyer belt up to its alumina refinery at Damanjodi.

WORKFORCE

The company had two kinds of work force including the executive class which covered engineers and management graduates, and the workers class which covered *mazadoor* (laborers) and technicians. The ratio of executives and non-executives was roughly 1:100. Maximum qualification of the worker class was the Indian Institute of Training (ITI) certificate. Around 80% of the executives and 90% of the workers were from Orissa while around 95% of the workers were from the surroundings of the company. The qualification required for the first category was 10th standard while for the second, a certificate from ITI was required. Some of the workers were earning Rs. 30,000 per month, which was perceived to be very high.

The staff strength at the company's Angul plant as on June 23, 2006 was 4,500[5] of which 1,100 were in the executive rank and the rest were workers. The company's Damanjodi complex had over 2,300 employees on roll and nearly 1,200 contract workers. The company had a coordination committee comprising employees of officers and workers rank. The ratio of labor force was low in the company as compared to the other players because of the highly mechanized operations.

BUSINESS ANALYSIS OF NALCO

Panchpatmali hills, Damanjodi were considered to be the largest bauxite reserves in Asia and the fifth largest bauxite reserve in the world with a capacity of 2.4 mn TPA. The company was strategically located near these hills, which gave it several logistical advantages. The mine had an estimated mineable reserve of 300 mn tons which was sufficient to meet over 100 years of company's bauxite requirement at the mining rate in 2006. The ore found in the mines was of high quality with high

5 http://timesofindia.indiatimes.com/articleshow/1673693.cms Retrieved on June 26, 2006.

percentage of alumina (45%) and a low percentage of silica (2% to 4%). NALCO became one of the lowest cost manufacturers of alumina in the world due to the low cost of the ore coupled with its technological advantage (more advanced pre-baked technology as against the older and less efficient soderberg process). This helped it to produce superior quality product and attract a premium to the London Metal Exchange (LME) price. Coal India Ltd. opened a mine in Mahanadi Coal fields, with an annual capacity of 3.5 mn tons for the continuous supply of coal to the captive power plants. The disinvestment commission identifies some strengths and areas of concerns for NALCO (Appendix 4).

ORGANIZATIONAL CLIMATE[6]

Some of Orissa's finest minds were working in NALCO. About 80% of the employees in the officer category were from Orissa. The officers of the company were highly respected in the state and sometimes treated as an the Indian administrative Service (IAS) officers. Because of this most of the people preferred government jobs including NALCO. However, the employees' turnover among Graduate Engineering Trainees (GET) was very high. One the engineers claimed that in the last couple of years, about 70% of the GET left NALCO within two years of their joining. Commenting on the existing staff of the company, he said:

> "A substantial portion of officers, after working for 5 to 10 years, lost their technical skills, work stamina, discipline, and ability to work. This is PSU culture."

He further added that this might be one of the major reasons for opposing disinvestment to save their jobs. The social and economic awareness among the workers was very low. One of the officers said:

> "Some of the workers cannot read or write. They do not know how to open a computer. They even do not know the name of the president of India."

Many of the employees/workers got jobs in lieu of their land where the company's plant was set up. At the time of expansion of the plant, land owners demanded for a job. Management upgraded the minimum requirement for the recruitment of workers to ITI certificate. However, after the analysis, it was found that most of the land losers only passed 10th standard. To uplift their qualification standards, the management gave them an offer to study for two years in ITI for which the company would bear the cost. After taking ITI education, the workers had an opportunity for promotion from T_0 to T_6 (i.e., from *mazadoor* to technician category) with an increase in salary. However, the local laborers refused the offer. Some officers were of the view that the opposition was due to some political and union leaders who wanted to force the management for accepting their demands.

NALCO AND ITS SURROUNDINGS

Orissa is predominantly an agricultural state where nearly 70% of the working population depend on agriculture. This

[6] Based on the discussion with some NALCO officers through e-mail and telephonic interviews.

industrially backward but resource-rich state is unfortunate to have the investment of private companies. It is the only state in the country with the largest collection of tribals. Though the state was the part of the new economic reforms of the GOI, the local people resisted developmental activities in the interest of their own concerns. For example, there were frequent conflicts between private mining companies and tribal communities. The impact of globalization reflected through closures, privatization, rightsizing/ downsizing, etc. Workers resisted this through strikes. However, the Government of Orissa had managed to maintain a good industrial relations in spite of the financial crunch (Sahoo and Pani, 2007).[7]

Around NALCO, the literacy rate among the people was very low. Of the villages in and around the company, only about 15% passed their 10th standard. There were many private ITI institutes since ITI certificate was required for recruitment of workmen in NALCO. The authenticity of those institutes was not high. The local community was very traditional. On Thursday, which is considered as a day of Goddess Laxmi (A sign of wealth in Indian mythology), a substantial portion of the localities never go to bank, telephone office and post office to avoid money transitions. Women literacy was very low and they usually do not go out side the area.

NALCO was one of the few industrial units that carried out its entire manufacturing process within the State of Orissa and therefore, people considered it as the pride of Orissa. It established and maintained amenities and services for local communities through its Peripheral Development Program (PDP). It had been supplying water to about 40 villages around the Angul district. The compensation that the company paid to communities displaced by its industrial facilities was also generally regarded being generous and as a model for other industrial units.

POLITICAL OUTLOOK IN INDIA

The Republic of India, the national capital being New Delhi, consists of few national major and many regional political parties. The national players include the Indian National Congress, Bharatiya Janta Party (BJP), Communist Party of India (CPI), Communist Party of India (Marxists) etc. The regional political parties include, Biju Janta Dal (Orrisa), DMK (Tamil Nadu), etc. INC and BJP are the two prominent parties that ruled the country at the national level and also have ruling governments in many states. At the centre, these two parties have a strong rivalry while at the state level, different regional political parties have an important role to play in the formation of government. The end of single party government at the centre, and beginning of coalition governments, makes the decision-making process both at the policy design and execution levels difficult. Political parties ally with each other to form governments at the national and

7 Sahoo Chandan Kumar and Pani Debabrata (2007), "Management of Industrial Disputes in Orissa: Emerging Scenario", *Management and Labour Studies*, Vol. 32, No. 2, pp. 225-239.

regional levels. Increasingly it is observed that if the ruling parties at the centre and the state are same, the decision-making become easier and vice versa.

DISINVESTMENT COMMISSION OF INDIA AND ITS ROLE

The Ministry of Industry (Department of Public Enterprise), Government of India (GOI) constituted a Public Sector Disinvestment Commission by a resolution on August 23, 1996. Initially, the commission was for the period of three years under G V Ramkrishnan and was further extended till November 30, 1999. The commission was reconstituted vide Ministry of Disinvestment by a resolution on July 24, 2001 for a period of two years under the chairmanship of R H Patil along with four other members. The term of the commission was subsequently extended till October 2004. After the formation of the new government, the United Progressive Alliance (UPA), at the centre, all the member including the chairman of the disinvestment commission resigned in May 2004 and the commission wounded up by the end of October 2004.[8]

In May 2004, the government adopted the National Common Minimum Program (NCMP), which outlined the policy of the government with respect to the public sector. It said:

> "The UPA Government is committed to a strong and effective public sector whose social objectives are met by its commercial functioning. But for this, there is need for selectivity and a strategic focus. The UPA is pledged to devolve full managerial and commercial autonomy to successful, profit-making companies operating in a competitive environment. Generally, profit-making companies will not be privatized."[9]

On May 27, 2004, the GOI converted the Ministry of Disinvestment into a Department under the Ministry of Finance and assigned it all the work relating to disinvestment, which the Ministry of Disinvestment was handling.[10]

According to the resolution, the Disinvestment Commission was an Advisory Body and Public Sector Units (PSUs) which would implement the decision of the government under the overall supervision of the Disinvestment Commission.

The main objectives of setting up of the Disinvestment Commission were:

- To prepare an overall long-term disinvestment program for PSUs referred to the Commission.
- Determine the extent of disinvestment.
- Select financial advisors to facilitate the disinvestment process.
- Supervise the overall sale process and take decision on instruments, pricing, timing, etc.

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8 http://www.divest.nic.in/discommission.htm Retrieved on June 12, 2007.

9 http://www.divest.nic.in/policy.htm Retrieved on June 12, 2007.

10 http://www.divest.nic.in/annrepo2004-05/mainreport.htm Retrieved on June 12, 2007.

- Monitor the progress of the disinvestment process and advise the government on possible capital restructuring to ensure maximum realization through disinvestment.

On February 2005, the government decided to call off the process of disinvestment through strategic sale of profit making Central PSUs (Appendix 5).

DISINVESTMENT OF NALCO: 2001-02

The GOI divested 12.85% equity of NALCO in two phases in 1992-93 and 1993-94 and consequently, holding 87.15% equity stake in the company. Further, in September 2001, Disinvestment Ministry approached the Cabinet Committee on Disinvestment (CCD) to sell 30% of government's equity in NALCO. This was to be done in three phases:

- Offering equity in the form of an Initial Public Offer (IPO) to domestic investors (10%);
- Issuing either Global or American Depository Receipts to overseas investors (20%); and
- A strategic sale (29.15%).

Besides this, after selling 2% to the company's workers, the government equity was to be brought down to 26%. However, government could not execute the decision because of some reasons.

In July 2002, the Disinvestment Ministry again approached the CCD with a modified proposal that the strategic sale precedes the off-loading of equity in the domestic (10%) and international markets (20%). In wake of the recommendation of CCD (Appendix 6), the government in July 2002 announced the decision to divest 29.15% of the government's equity, with a controlling stake to a strategic partner.[11] This process was proposed to complete in six months. In October 2002, an inter-ministerial group was constituted and ABN Amro Rothschild-Enam Financial Consultants were appointed as joint global coordinators for all three stages of the disinvestment process. Industrial Credit and Investment Corporation of India (ICICI) Securities and J P Morgan were appointed as book-runners for the disinvestment.

Many bidders including world players like Russia's RusAl, Alcoa of the United States, Switzerland's Glencore and French metals group Pechiney were interested in bidding. Among Indian bidders, HINDALCO was bidding solely while Sterlite, and Tata Steel were believed to be bidding in collusion with a foreign major. Fifteen bidders were short-listed for the final bidding.

GOVERNMENT'S LOGIC FOR DISINVESTMENT

The then disinvestment minister, Arun Shourie, justifying the disinvestment decision of GOI said that NALCO's profitability would decline in the future because of its dependence on alumina exports and its low-value addition. He also claimed that in five years NALCO would end up in the same plight as Steel

[11] http://www.hinduonnet.com/fline/fl2001/stories/20030117005301000.htm Retrieved on May 20, 2007.

Authority of India Ltd. (SAIL). He said that NALCO's profitability rested on its access to high quality bauxite at low prices; that its reach in value-added segments of the aluminium industry was limited; and that it could not withstand competition in the future as a public sector company. He emphasized that the profitability does not means efficiency.

INTEREST OF PRIVATE INVESTORS IN DISINVESTMENTS OF PSUs

Investment analysts had assessed NALCO's enterprise value at about Rs. 300 bn in addition to Rs. 4,0 bn for large tracts of land belonging to the company. The winner of the NALCO sale was supposed to take over the company at a low price, as the estimates did not include the value of assets such as the bauxite mines, buildings, and other amenities.[12]

HINDALCO, the only other Indian bidders for NALCO, was desperate to gain control of NALCO. It was facing strong competition from NALCO. On October 28, 2002, workers at the company's smelter in Angul, prevented representatives of HINDALCO, one of the 15 short-listed bidders from entering the plant to conduct due diligence. On October 28, 2002, B C Ray, who heads the coordination committee in Angul, said, "the workers have decided not to allow representatives of private companies—Indian or foreign to enter the premises". NALCO employees saw HINDALCO as the most likely buyer of the company and feared of a private monopoly.[13]

OPPOSITION OF DISINVESTMENT

Opposition from within the government: The department of mines objected to the process of the sell off of NALCO. The Secretary, department of mines raised the following issues:

- With barely 10 to 11% of floating stock of the NALCO scrip in the market, there was little scope for proper price formation.
- Sell off in the domestic and international markets would add depth to the market.
- NALCO was in the process of completing its expansion project and noted that determining the price at this stage would be a difficult and hazardous task.
- The secretary also referred to the objections raised by the Orissa government.

He said that separating the disinvestment process into two distinct stages would make the issue 'less controversial, easily implementable, and in time'. The department of mines also threw in a fresh proposal for a 'shared management', with both the government and the private partners holding equal equity. The secretary said that the CCD had not considered this proposal which had the potential to create an 'Indian multinational company'.

12 http://www.hinduonnet.com/fline/fl2001/stories/20030117005301000.htm Retrieved on May 01, 2007.
13 http://www.hinduonnet.com/fline/fl2001/stories/20030117005301000.htm Retrieved on July 12, 2006.

Ms. Uma Bharti, the then Union Mines Minister complained that the disinvestment ministry was consistently ignoring her ministry's views on the NALCO sell off. She was also unhappy with the decision to appoint a single agency to coordinate all three stages of the NALCO disinvestment process. However, she clarified that her disagreement with Shourie the then Disinvestment Minister, was limited to the modalities of disinvestment and was not over the policy in general.

The chairman of the Standing Conference on Public Enterprises (SCOPE), an apex body of PSEs, said that NALCO's market share in the primary aluminium market was set to increase after the ongoing expansion projects were completed, therefore, only loss making PSUs should be divested.[14]

Naveen Patnaik, the chief minister of Orissa and a partner of the National Democratic Alliance (NDA) government at the centre, opposed the decision. He wrote to the Prime Minister Atal Behari Vajpayee complaining that the ministry of disinvestment had ignored the views of the state government.

OPPOSITION FROM OUTSIDE THE GOVERNMENT

Political parties and trade unions launched a 12 h strike. On September 19, 2002, opposition parties called a statewide *bandh* (strike). The *Swadeshi Jagran Manch* has registered its protest against the danger of allowing private monopolies from controlling the Indian Aluminium industry. The major central trade unions, barring the *Bharatiya Mazdoor Sangh* (BMS) that is associated with the Bhartiya Janta Party (BJP), have initiated a joint campaign against the disinvestment decision of NALCO.

On July 26, 2002, K P Singh Deo, former Union Minister and Congress (I) Member of Parliment (MP) representing Dhenkanal, which covers Angul, petitioned the Lok Sabha on behalf of the NALCO Officers' Association, demanding the cancellation of the sell off decision. The petitions committee of the Lok Sabha was formed, headed by the Communist Party of India (Marxist) MP Basudeb Acharia. In September, it visited Angul and Bhubaneswar, held its informal discussion with petitioners and made the following observations:

- Orissa received considerable benefits owing to the presence of NALCO.
- Apart from NALCO's PDP, the company also supplies cheap power to the Orissa grid and gives direct and indirect employment to thousands of workers.
- The people of Orissa are against the privatization of NALCO because they would incur a substantial loss by this move.

The committee presented its report to the Lok Sabha on November 22, 2002 after examining the views of the disinvestment ministry and the ministry of Mines and Coal.

OPPOSITION AT THE ORGANIZATIONAL LEVEL

The opposition to the NALCO's sell off started mounting soon after the government

[14] http://www.hinduonnet.com/fline/fl2001/stories/20030117005301000.htm Retrieved on July 12, 2006.

announced the disinvestment of the company in July 2002. Among the workers, there was the rumor that it is not the disinvestment by GOI but a total sell off. Sitaram Pradhan, a worker in the power plant, said:

> "Workers were initially confused about the term 'disinvestment'. Initially, they believed that government wants to sell off some of its shares. However, later they believed that the company was being privatized and therefore, they rose in anger."

> He further added

> "The semantic jugglery by power brokers in Delhi cannot fool us anymore."

Workers and officers of the company formed a joint action committee in all the company's facilities on the very day the Disinvestment Ministry got the CCD approval for the strategic sale. On October 28, 2002, B C Ray, who heads the coordination committee in Angul, said:

> "We have conducted our struggle peacefully, but if the government refuses to see reason, we cannot guarantee that there will be no violence in Orissa."

Talking about the strategies to oppose the decision, Shivaji Patnaik, vice president of the Orissa unit of the CITU, said that the NALCO's struggle had learnt its lessons from the failure of the workers' struggle in BALCO. He told that the NALCO struggle began soon after the government announced its decision to sell the company, unlike in the case of BALCO, where workers started their agitation after the government sold the company. Moreover, the movement did not depend on Naveen Patnaik as much as the BALCO struggle depended on the promise of the then chief minister of Chattisgarh, Ajit Jogi, that he was with the workers in their struggle. He commented:

> "The crucial difference in the NALCO struggle is that the initiative is firmly in the hands of the workers and their unions, not in the hands of those who are vacillating on the question of privatization."

OPINION OF EXPERTS

After its acquisition of BALCO, Sterlite controls about 13% of the market. HINDALCO, which already has half the market was expected to increase its market share to three-quarters if it succeeds in its attempt to buy NALCO. If that happens, two companies will control the entire market for primary Aluminium in the country.

According to some experts, Disinvestment Ministry's narrow definition of strategic sectors including only defense-related or the railways, allows little leeway for the government to retain the control of units having a strategic role in the economy.

Mr. Kishor Samal, a senior economist at the Nabakrushna Choudhury Centre for Development Studies in Bhubaneswar, was of the opinion that though NALCO's direct linkages with its community was not substantial, its indirect linkages to the economic activity in the informal sector in Orissa were substantial. The company represented a model for other industries in the backward state because most of the big industrial houses came to Orissa only to invest in natural mineral-based and processed-mineral industries. He also pointed out that exploitation by private companies had resulted in ecological damage and affected the livelihood of tribal communities.

OUTCOMES OF THE OPPOSITION

Finally, because of the mounting pressure from all corners, government dropped the decision of disinvestment in NALCO.

DISINVESTMENT OF NALCO: 2005-06

For almost two years, there was no news of disinvestment in NALCO. In the year 2004, the government at the centre changed and UPA took the power.

The then Mines Minister Sis Ram Ola, answering to the reporters on June 3, 2005, ruled out any disinvestment in the Aluminium major NALCO. He clarified:

> "There is no plan to disinvest Government's stake in NALCO."[15]

Contrary to the above statement, Ola on August 22, 2005, said that his ministry favored 10% disinvestment of government equity in profit making NALCO. Replying to a question in the Rajya Sabha, on August 22, 2005, he said:

> "Though the department of disinvestment had earlier sent a proposal for sale of 20% equity of the NALCO, the ministry in its comment had only favored disinvestment of 10% equity. No final decision has been taken in regard."

On June 22, 2006, the government decided to sell 10% of its equity in NALCO through the book building process. Government estimated to raise Rs. 14 bn through the sale of equity. The funds were to be placed in the National Investment Fund, which would be managed by the Life Insurance Corporation (LIC), the State Bank of India (SBI) and the Unit Trust of India (UTI).

However, the Finance Minister P Chidambaram was of the view that disinvestment of PSUs done through the public offer route will be considered on a case-by-case basis. He had said no ministry had proposed any such disinvestment recently.

OPPOSITION FROM WITHIN THE GOVERNMENT

The UPA Government faced strong opposition from the Left parties, which were their crucial ally.

OPPOSITION AT THE ORGANIZATIONAL LEVEL

On the disinvestment issue, the opinion of employees on disinvestment was divided. Some officers felt that '*chamchagiri*' (sycophancy) is regarded as one sought after quality which hurts the dedicated people. However, some dedicated employees/officers who were

[15] http://economictimes.indiatimes.com/articleshow/1131303.cms Retrieve on July 12, 2006.

running the company profitably, had inclination for disinvestment of the company. A substantial number of employees were neutral on the disinvestment issue. Workers including trade union leaders had very little idea about disinvestment. Due to the inability of the internal trade unions, the workers/ employees were thinking to take help of some outside leaders for discussion and negotiation with the central government on the disinvestment of the company.

However, after the government's announcement of disinvestment, the agitation started mounting up. On June 23, 2006, the production of finished Aluminium in the company's smelter plant at Angul stopped. About 5,000 workers and officers of the plant went on 24 h strike; shut the main entrance of the company's smelter and captive power plants, opposing the centre's decision to divest 10% stake of the company. The per day capacity of the smelter plant was 950 tons of finished Aluminium metal.

Aluminium plants had technical compulsions. There were 600 pots, which were the key equipment for production of aluminum and had to be kept running. Disconnection of power could make them permanently inoperative, the replacement of which was both costly and time-consuming. NALCO authorities feared that a prolonged stir might turn sensitive pots at the smelter plant defunct. However, the company's executive director at Angul U B Patnaik claimed that the employees had agreed to allow 153 executive rank officers and 106 casual workers to run six power plant units, which produced around 650 mw power.

> "The Aluminium production from the smelter plant has stopped. We have made temporary arrangements to keep the pot line alive."[16]

A coordination committee, which comprised officers', workers, and trade union leaders, were expected to meet to chalk out a future strategy. A NALCO spokesperson said,

> "The strike was peaceful, but affected production seriously. All categories of employees, including officers and contract laborers, took part in the strike."[17]

NALCO Mazdoor Sangha President Somnath Mohapatra said:

> "If the Government does not reverse its decision, the agitation will intensify."[17]

He further said that the workers would stop production at the company's refinery unit and mines at Damonjodi on June 24, 2006. The company's employees union secretary B P Das said that 2,308 employees and 1,200 contract workers would take part in cease-work on June 24, 2006. Two schools located in the area would remain closed. The ruling Biju Janta Dal called a 12 h strike at Damanjodi on June 25, 2006.[18] Consequently, over 2,300 employees

[16] http://timesofindia.indiatimes.com/articleshow/1673693.cms Retrieve on June 26.
[17] http://timesofindia.indiatimes.com/articleshow/1675090.cms Retrieve on June 26.
[18] http://timesofindia.indiatimes.com/articleshow/1675090.cms

and nearly 1,200 contract workers, stopped dispatch of alumina by rail, this led to the closure of production at Angul plants.[19]

On June 24, 2006, workers stopped work at different plants including the alumina refinery plant at Damonjodi in Koraput district and Panchpatmalli bauxite mines. Workers burned effigies of Prime Minister Manmohan Singh and the Congress president Sonia Gandhi in the morning as agitation intensified. People at Damonjodi complex stopped dispatch of alumina by rail. Later, they held a public meeting where speakers opposed the Centre's move to sell 10% of NALCO's equity.

NALCO Employees' Union secretary B P Das said:

> "The strike was overwhelmingly successful. There was zero production at the refinery and mines."

He claimed that the company suffered losses to the tune of Rs. 80 mn, owing to a daylong strike.[20]

NALCO officers at the corporate office also supported the opposition by boycotting the work on June 25, 2006. President of the NALCO Employees Federation of India, Shibaji Patnaik warned the government:

> "The strike was a token measure to demonstrate opposition to the disinvestment. The agitation would further intensify if government does not withdraw the move."[21]

The aluminum production at its smelter plant at Angul resumed work even as employees continued to demonstrate inside the plant premises. NALCO's Executive Director U B Patnaik from Angul said:

> "Employees have joined their duties. Now as many as seven units in the power plant are in operation. All the units of smelter plant are running normally."

OPPOSITION FROM OUTSIDE THE GOVERNMENT

June 25, 2006, a state-level convention was held in Bhubaneswar which was attended by the major trade unions including AICCTU, AITUC BMS, CITU, HMS, INTUC, and the Industrial Federations of Banks, Insurance, Railways attending where it was decided to observe a state wide general strike on June 30, 2006. It was also decided that if the decision is not reconsidered after the June 30 strike, an all-party delegation would meet Prime Minister Manmohan Singh. In the third phase, the trade unions decided to call for an Orissa *bandh*.[22] It was also decided to hold a central joint demonstration at Delhi on July 5, 2006. On June 30, 2006, the activists of major political parties and seven central trade unions demonstrated in front of almost all the central offices, including banks and railway stations, across Orissa. Movement

19 http://timesofindia.indiatimes.com/articleshow/1677042.cms Retrieve on June 26, 2006.

20 http://timesofindia.indiatimes.com/articleshow/1677042.cms Retrieve on June 26, 2006.

21 http://www.myiris.com/newsCentre/newsPopup.php?fileR=20060624110720088 &dir=2006/06/24&secID=livenews

22 http://www.hindu.com/2006/06/26/stories/2006062606941200.htm Retrieve on June 26, 2006.

of coal was also affected as workers in the industrial areas in and around Angul joined the agitation, bringing the trains to a complete halt. In steel city Rourkela, the train services were disrupted for about four hours. Several social organizations, including the Orissa High Court Bar Association, also announced their support to the protest.

Two Biju Janata Dal leaders and ministers, led a protest rally at NALCO's corporate office at Bhubaneswar. Supporting the workers' agitation, state Congress president Jayadev Jena said:

> "The decision (to disinvest) violates the spirit of the common minimum program."
>
> He further added,
>
> "In 2002, Congress was on the forefront of an agitation against the NDA Government's bid for similar disinvestment of public companies"[23]

NALCO-recognized land displaced people's union president Krutibas Raju said:

> "We have decided to warn the Union Government with this one-day token strike. If the decision of 10% disinvestment is not withdrawn, we will obviously be forced to decide more stringent action."

AITUC General Secretary and CPI leader Gurudas Das Gupta said:

> "It is not that we have an underhand deal with the Government. This is not a mock fight."[24]

He further added that the trade unions should have been consulted before the decisions taken and disinvestment of profit-making PSUs violates the National Common Minimum Program (NCMP). He warned that if the government still persisted, the trade unions would further intensify their struggle which may include staging an all India strike.

Although the production in NALCO was affected due to strike, other PSUs like Rourkela Steel Plant, NTPC thermal power stations, Mahanadi Coalfield Limited and Paradip Port Trust functioned as usual.

The agitation intensified and spread all over the country. On July 02, 2006, eight major central trade unions; CITU, AICCTU, AITUC, BMS, and HMS had jointly appealed to all trade union movements all over the country to raise their powerful voice against decision of the government.[25]

OUTCOME OF OPPOSITION

Finally, on July 7, 2006, because of intensifying pressure and opposition, the Prime Minister Manmohan Singh put disinvestment decisions of NALCO on hold (Appendix 7). One of the key reasons for the decision was the statement of the then Chief Minister of Tamil Nadu and

23 *Ibid* 10.
24 http://www.hindu.com/thehindu/holnus/002200606271927.htm Retrieve on July 11, 2006.
25 http://pd.cpim.org/2006/0702/07022006_nalco.htm Retrieved on August 11, 2006.

DMK (A regional political party) Chief M Karunanidhi, that the party was reconsidering its support to the UPA Government.[26] However, on July 11, 2006, after the PMs decision, the Union Minister of State for Commerce, Jairam Ramesh said:

> "There was a proposal that the Rs. 14 bn, which the UPA Government wanted to get through the 10% disinvestment in NALCO for social sector spending, could be got from the company's reserve fund. Or NALCO could be asked to raise its dividend payoff to the Government."

> "The intention of the UPA Government was not privatization. In NALCO's case, we have to be sensitive. We have to allay the fears that disinvestment will lead to privatization."

> He further said,

> "Disinvestment could be done selectively', and added, 'you need not have 100% equity in a company to keep it as a government company."

Ramesh criticized the ruling BJD-BJP coalition in Orissa for indulging in 'double standards' on the NALCO disinvestment issue. He said:

> "It was the Chief Minister and BJD president Naveen Patnaik, who as the mines minister had proposed 30% disinvestment in NALCO. When the NDA came to power at the Centre it favored total privatization of the company with the then Disinvestment Minister Arun Shourie proposing 60% disinvestment in NALCO."[27]

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[26] http://www.myiris.com/newsCentre/newsPopup. php?fileR=20060707000311088 &dir=2006/07/07&secID=livenews Retrieved on August 11, 2006.

[27] http://www.zeenews.com/znnew/articles.asp?aid=306345&sid=NAT Retrieved on August 11, 2006.

APPENDIX 1

Financial Analysis						
Cost Analysis: Mfg. cos. National Aluminium Co. Ltd.						
(Non-Annualized)	March 2001 12 Months	March 2002 12 Months	March 2003 12 Months	March 2004 12 Months	March 2005 12 Months	March 2006 12 Months
Costs as % of Gross Sales						
Raw materials, stores, etc.	11.58	14.18	13.87	13.51	10.59	10.96
Raw materials	10.51	13.27	13.03	12.65	9.79	10.24
Stores and Spares	0.99	0.92	0.84	0.86	0.8	0.72
Packaging expenses	0.08	0.00	0.00	0.00	0.00	0.00
Purchase of finished goods	0.00	0.00	0.00	0.00	0.00	0.00
Energy (power and fuel)	13.74	15.08	16.12	15.44	13.80	15.09
Wages and Salaries	7.77	13.90	9.16	7.48	6.38	6.26
Plant and Machinery repairs	4.17	3.97	4.17	4.25	3.11	3.14
Other operating expenses	0.87	1.07	1.25	1.10	1.16	1.36
Insurance premium	0.09	0.10	0.11	0.13	0.13	0.09
Indirect taxes	7.97	9.16	9.17	9.70	9.65	10.70
Excise duties	5.81	6.39	6.01	6.37	6.87	8.19
Depreciation	11.61	12.44	12.29	12.57	9.97	7.00
Change in stock of finished goods	0.51	–0.02	0.75	–0.34	0.00	–0.81
Selling and Marketing expenses	0.80	0.78	0.78	0.78	0.64	0.21
Advertising	0.09	0.10	0.07	0.09	0.05	0.09
Marketing	0.71	0.69	0.71	0.68	0.59	0.12
Distribution expenses	1.38	1.44	1.50	1.61	1.61	1.47
Provision for doubtful/bad debts	0.01	0.03	0.02	0.01	0.11	0.00
Other repairs	0.81	0.78	0.79	0.69	0.60	0.56
Amortization	0.90	0.63	0.38	0.12	0.22	0.13
Miscellaneous expenses	1.91	1.82	1.81	1.41	1.20	1.04
Less: expenses capitalized	0.00	0.00	0.95	0.00	0.00	0.00
Financial charges	4.08	4.88	5.26	3.54	1.98	0.74
Interest	3.85	4.61	5.03	3.37	1.85	0.61

APPENDIX 1 (Cont.)

Cost Analysis: Mfg. cos. National Aluminium Co. Ltd.						
(Non-Annualized)	**March 2001 12 Months**	**March 2002 12 Months**	**March 2003 12 Months**	**March 2004 12 Months**	**March 2005 12 Months**	**March 2006 12 Months**
Costs as % of Gross Sales						
Other financial charges	0.10	0.13	0.11	0.06	0.05	0.04
Lease rent	0.13	0.14	0.12	0.11	0.09	0.09
Tax provision	8.36	4.97	7.88	9.09	14.05	15.69
PAT (NOI, NNRT)	**23.53**	**14.89**	**15.75**	**19.04**	**24.93**	**26.43**
Gross Sales	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Gross Sales (Rs. billion)	**25.31**	**25.10**	**29.26**	**34.94**	**46.25**	**53.86**

Source: NALCO's official website: http://www.nalcoindia.com/outdefault.htm

APPENDIX 2

Profit and Loss Account of NALCO						
Rs. billion (Non-Annualized)	**March 2001 12 Months**	**March 2002 12 Months**	**March 2003 12 Months**	**March 2004 12 Months**	**March 2005 12 Months**	**March 2006 12 Months**
Income						
Sales	25.31	25.10	29.26	34.94	46.25	53.86
Manufacturing	24.09	23.87	27.47	33.76	44.58	52.93
Trading	0.00	0.00	0.00	0.00	0.00	0.00
Fiscal benefits/subsidies	1.17	1.02	1.45	1.12	1.52	0.85
Internal transfers	0.04	0.21	0.33	0.06	0.15	0.08
Other operating income	0.00	0.00	0.00	0.00	0.00	0.00
Other income	0.35	0.23	0.42	0.55	0.64	1.32
Dividend income	0.00	0.00	0.00	0.00	0.00	0.00
Interest income	0.18	0.11	0.26	0.34	0.51	1.12
Rent income	0.02	0.03	0.02	0.02	0.02	0.02

APPENDIX 2 (Cont.)

Profit and Loss Account of NALCO

Rs. billion (Non-Annualized)	**March 2001 12 Months**	**March 2002 12 Months**	**March 2003 12 Months**	**March 2004 12 Months**	**March 2005 12 Months**	**March 2006 12 Months**
Miscellaneous income	0.15	0.09	0.14	0.19	0.11	0.17
Change in stocks	–0.11	0.05	–0.32	0.10	0.26	0.60
Finished goods	–0.13	0.0039	–0.22	0.12	0.0007	0.43
Semi-finished goods	0.02	0.04	–0.10	–0.02	0.26	0.16
Non-Recurring Income	0.28	0.14	0.21	0.25	0.22	0.47
Gain on sale of assets	0.33	2S.85	0.03	0.15	0.79	0.02
Gain on sale of investments	0	0	0	0	0	0
Insurance claim/s	0	0	0	0	0	0
Tax refunds/ adj./defr. tax asset	0.24	0.09	0	0.02	0.15	0.11
Depreciation provision/s written back	0	0	0	0	2.37	0
Other provisions written back	0.0061	0.0016	0.0005	2.0065	0.03	0.01
Other non-recurring income	0.03	0.02	0.2100	0.2100	0.0074	0.35

Source: NALCO's official website: http://www.nalcoindia.com/outdefault.htm

APPENDIX 3

Silent Feature of NALCO's Different Plants

NALCO

Bauxite Mines

Location: Panchpatmali hills of Koraput district

Capacity: 4.8 mn tpa

Operational Since: 1985

The Salient Features

Area of Deposit: 16 sq. km

Resource: 310 MT

Ore Quality: Alumina 45%, Silica 2%

Mineralogy: Over 90% gibbsitic

Overburden: 3 meters (average)

Ore Thickness: 14 meters (average)

Transport: 14.6 km long single flight multicurve cable belt conveyor of 1800 tph

Alumina Refinery

Location: Damanjodi in Koraput district

Capacity: 15,75,000 tpa

Operational Since: 1986 **Capacity Expansion** in 2006 to 21,00,000 tpa

The Salient Features

Atmospheric pressure digestion process.

Pre-desilication and inter-stage cooling for higher productivity.

Energy efficient fluidised bed calciners.

Co-generation of 3x18.5 MW power by use of back pressure turbine in steam generation plant.

Advanced red mud disposal system.

Captive Power Plant

Location: Angul

Capacity: 960 MW capacity

Operational Since: Capacity expansion in 2006 to 1200 MW

The Salient Features

Micro-processor-based burner management system for optimum thermal efficiency.

Computer controlled data acquisition system for on-line monitoring.

Automatic turbine run-up system.

Specially-designed barrel type high pressure turbine.

Electrostatic precipitators with advanced-intelligent controllers.

Wet disposal of ash.

Aluminium Smelter Location: Angul

Capacity: 3,45,000 tpa

Operational Since: Capacity expansion in 2006 to 4,60,000 tpa

The Salient Features:

Advanced 180 KA cell technology.

Micro-processor-based pot regulation system.

Fume treatment plant with dry-scrubbing system for pollution control and fluoride salt recovery.

Integrated facility for manufacturing carbon anodes, bus bars, anode stems.

4 × 35 tons and 4 × 45 tons furnaces and 2 × 15 tph and 2 × 20 tph ingot. casting machines.

4 × 45 tons furnaces and 2 × 9.5 tph wire rod mills.

2 × 45 tons furnaces and 60/42 per drop billet casting machine.

2 × 1.5 tons induction furnace with a 4 tph alloy ingot casting machine.

26,000 tpa strip casting machines.

Rolled Products Unit: Besides the above units NALCO had set up a 50,000 MT per annum Rolled Products Unit, integrated with the Smelter Plant at Angul, for production of Aluminium cold rolled sheets and coils from continuous caster route.

Port Facilities: NALCO also has port facilities at the Inner Harbor of Visakhapatnam Port on the Bay of Bengal for exporting Alumina in bulk and importing Caustic Soda.

APPENDIX 4

Strengths and Areas of Concern in NALCO Identified by the Disinvestment Commission

Strengths

Access to Rich Ores: NALCO's bauxite reserve was the part of the East Coast reserves which are considered to be the largest bauxite reserve in Asia and fifth largest bauxite reserve in the world. The mine had an estimated reserve of 377 million tons (of which 300 mn tons were mineable), which was sufficient to meet over 100 years of NALCO's bauxite requirements at the current mining rate. The quality of the ore from NALCO's mines was very good as it has a high percentage of Alumina (45%) and a low percentage of silica (2-4%). NALCO's bauxite is reputed to be the lowest cost ore in the world.

Strong Financial Position: NALCO had a strong record of accomplishment of profit generation and cash accruals over the last five years. NALCO's profitability had been improving over the years because of higher realizations, low-cost technology, availability of cheap captive power, and higher capacity utilization.

Strong Business Position: Because of fully integrated operations, NALCO was one of the cheapest manufacturers of aluminium. The low production cost enabled NALCO to enjoy profitability even during a downturn in the aluminium cycle.

Areas of Concern

Lack of Autonomy: The company's expansion plans for de-bottlenecking the smelter and increasing smelter capacities from 230,000 tpa to 345,000 tpa had taken long time for clearances from the central Government. As a result, the strong internal accruals were used to pre pay loans instead of investing in the new expansion projects.

Limited Product Mix: NALCO's product mix was limited to alumina and primary Aluminium in ingot, rod, and billet form. The company had plans to enter the value added segment.

Recommendation

The Commission expressed the following views, which could help in improving investor perception and thereby enhance value:

- Corporate image building exercise to reinforcing the premier position occupied by NALCO.
- Follow internationally accepted accounting as well as disclosure practices.
- Regular interaction with investors to improve their perception.
- Provide representation to the investors holding 12.85% disinvested portion of NALCO's equity.
- As the preparation of disinvestment, Government should address issues relating to corporate governance, and autonomy to NALCO.
- Delay in according clearance to its expansion and de-bottlenecking projects increased the project costs substantially and affected the competitiveness of the company.
- Considering its impressive record of accomplishment over the past five years, government needs to give a full autonomy to the Board of Directors to enable it to conduct its operations successfully in the increasingly competitive environment.

APPENDIX 5

List of CPSUs Where Strategic Sale Cases were Called Off as on February 2005

S. No.	Name of the CPSU	Percentage of Equity Which Was Earlier Proposed to be Sold Through Strategic Sale
1.	Manganese Ore India Limited	51%
2.	Sponge Iron India Limited	100%
3.	Shipping Corporation of India Limited	54.12% (51% through Strategic Sale and 3.12% to Employees)
4.	National Aluminium Company Limited	61.15% (10% Domestic Issue, 20% ADR Issue, 29.15% Strategic Sale, 2% to Employees)
5.	National Building Construction Corporation Limited	74%
6.	National Fertilizers Limited	53% (51% through Strategic Sale and 2% to Employees)
7.	Rashtriya Chemicals and Fertilizers Limited	53% (51% through Strategic Sale and 2% to Employees)
8.	Hindustan Petroleum Corporation Limited	39.01% (34.01% through Strategic Sale and 5% to Employees)
9.	Engineers India Limited	61% (51% through Strategic Sale and 10% to Employees)
10.	Balmer Lawrie and Company Limited	61.8%
11.	Engineering Projects India Limited	74%
12.	Hindustan Paper Corporation Limited	74%
13.	State Trading Corporation of India Limited	75% (65% through Strategic Sale and 10% to Employees)

Source: http://www.divest.nic.in/policy.htm Retrieved on June 12, 200

APPENDIX 6

Important Recommendations Made by Disinvestment Commission

- Commission recommended to make a 'Disinvestment Fund' and to merge the 'National Renewal Fund' with this. The purpose of the fund was primarily for temporarily meeting the losses of some PSUs before disinvestment, short-term restructuring/closure if required, strengthening marginally loss-making PSUs in preparation for disinvestment.
- The creation of the Disinvestment Fund was to help the Government in undertaking disinvestment at the most opportune time in the market for maximum realizations.
- Commission recommended forming a Standing Empowered Group (SEG) to ensure smooth implementation of its recommendations. It further recommended that SEG could comprise the Cabinet Secretary, Secretaries of the Ministry of Finance, Department of Public Enterprises, and Administrative. The SEG was expected to undertake all the activities of the disinvestment process on the lines recommended by the Commission after Government's approval. SEG was also to keep the Commission informed of the various steps taken from time to time.
- The Commission needed to continue to take note of the Government's decisions and monitor the progress of the disinvestment process.
- The Commission recommended detailed and transparent procedures for the selection of strategic buyers. Commission recommended a process of global competitive bids from pre-qualified bidders.
- Commission recommended a transparent procedures for selection of financial advisors, global co-coordinators, and merchant bankers for facilitating disinvestment process.
- In case of sell of a substantial stake in the undertaking, management was to be transferred to the strategic buyer and further dilution of Government's share holding, where necessary, within a time frame.
- The Commission recommended that in order to establish credibility with the strategic buyers, the Government may, where necessary, keep its direct share holding below the level of investment being offered to the strategic bidder by divesting some portions of its equity to multilateral financing institutions, private equity funds, mutual funds and a few select PSUs.
- The induction of a strategic buyer enables the enterprise to access technology, finance, managerial support, and markets, which make it internationally competitive. This enables Government to maximize the sale proceeds, as the strategic buyer would normally be willing to pay a higher price than retail investor would.
- Commission recommended detailed procedure for offer of shares in profit making PSUs to Indian small investors and employees. It also recommended on the maximum number of shares and the discount to small investors and employees.
- Commission recommended audit of the disinvestment transaction within six months by Comptroller and Auditor General with the professionals of working of the industry and capital markets.

APPENDIX 6 (Cont.)

- Government should frame a clear and stable policy statement with long term perspective on the terms of VRS to assure adequate funds for this purpose. It further suggested a pension cum insurance scheme as an alternative to a one-time payment.
- To safeguard the credibility of the disinvestment process, there should be no disinvestment by Government in PSUs without reference to the Commission.
- The Commission recommended the grant of graded autonomy to all PSUs with reference to their financial performance and enforcement of accountability for commercial and financial performance of the management.
- It recommended setting up of a pre-investigation Board to encourage the exercise of autonomy in the interest of the Undertaking.

APPENDIX 7

Timeline of Events (Chronology of Events)

1981	GOI incorporated NALCO in Orissa.
1991	GOI started liberalization process.
August 23, 1996	GOI constituted a Public Sector Disinvestment Commission.
July 24, 2001	GOI reconstituted the commission.
September 2001	Disinvestment Ministry approached the CCD to sell 30% Government's equity in NALCO.
July 2002	Government announced 29.15% disinvestment of the government's equity with a controlling stake to a strategic partner.
	Disinvestment Ministry again approached the CCD with a modified proposal that the strategic sale precede the offloading of equity in the domestic (10%) and international markets (20%).
July 26, 2002	K P Singh Deo, former Union Minister, representing Angul, petitioned the Lok Sabha, demanding the cancellation of sell off decision.
September 19, 2002	Opposition parties called statewide strike.
October 2002	Inter-ministerial group was constituted and ABN Amro Rothschild-Enam Financial Consultants were appointed as joint global coordinators for all three stages of the disinvestment process.
November 22, 2002	Committee presented its report to the Lok Sabha on after examining the views of the Disinvestment Ministry and the Ministry of Mines and Coal.
2004	The United Progress Alliance took power at the center.
May 2004	All the member including chairman of the disinvestment commission resigned.

APPENDIX 7 (Cont.)

	Government adopted the National Common Minimum Program
May 27, 2004	GOI converted the Ministry of Disinvestment into a Department under the Ministry of Finance
February 2005	Government decided to call off the process of disinvestment through strategic sale
June 3, 2005	The Mines Minister Mr. Sis Ram Ola ruled out any disinvestment in the Aluminium major NALCO
August 22, 2005	Mr. Ola said his ministry favored 10% disinvestment of Government equity in profit making NALCO
June 22, 2006	Government decided to sell 10% of its equity in NALCO through the book building process
	Production of finished Aluminium in company's smelter plant at Angul stopped
June 24, 2006	About 5,000 workers and officers of NALCO went on a 24 hours strike and stopped work at different plants
June 25, 2006	Ruling party, Biju Janta Dal, called a 12 h strike at Damanjodi
	NALCO officers at corporate office also supported the opposition by boycotting the work
	In a state-level convention, attended by the major trade unions and the Industrial Federations of Banks, Insurance, and Railways, it was decided to observe a statewide general strike on June 30, 2006
July 02, 2006	Eight major central trade unions had jointly appealed to all trade union movement all over the country
July 07, 2006	Prime Minister Manmohan Singh put disinvestment decisions of NALCO on hold

ANNEXURE 1

Aluminum Industry in India

The aluminum industry in India could be divided into two segments: (1) Primary Aluminium manufacturers and (2) Secondary fabrication units. Primary Aluminium could be sold in the form of ingots, billets and slabs. The secondary fabrication units process Aluminium metal produced by the primary producers to manufacture three main categories of value added products: redrawn rods, rolled products and extrusions. The secondary product manufacturers have the additional option of using imported Aluminium under Open General License (OGL).

ANNEXURE 1 (Cont.)

The main primary producers of Aluminium in India were National Aluminium Company Ltd. (NALCO) and Bharat Aluminium Company Ltd. (BALCO) in the public sector and HINDALCO Industries Ltd. (HINDALCO) and Indian Aluminium Company Ltd. (INDAL) in the private sector. NALCO, Hindalco and BALCO accounted for 90% of the total domestic output.

The industry structure in the primary segment was oligopolistic in nature due to high entry barriers such as high capital cost, restricted access to technology and long gestation periods. However, with the lowering of the import duties since 1992, the domestic prices of Aluminium were strongly linked to the prices on the London Metal Exchange (LME) and hence the primary market might be considered competitive, in spite of a limited number of players.

The industry structure in the secondary value added segment was fragmented, while a large number of secondary producers were scattered across the country. The threat of substitutes had a bearing on the demand for Aluminium products and this, in turn, limits the margins for both primary as well as secondary producers.

Aluminium was manufactured by refining bauxite and then processing the refined intermediary (Alumina) in a smelter to extract Aluminium. The process of producing Alumina from bauxite was dependent on the nature of the ore. The reduction of Alumina into Aluminium was carried out in electric smelters. Though there had been a shift in technology, the process technology for manufacture was not likely to exhibit significant changes. Improvements if any, was expected to be gradual and could be easily sourced from other countries.

India had 12% of the world's reserves of bauxite but producing only 3% of the Aluminium in the world. Despite higher power tariff were prevailing in the country, domestic producers' measured up to global standards due to captive power plants and low cost of bauxite. The sectoral usage of Aluminium was quite different in India when compared with global usage patterns.

The key success factors in Aluminium industry were:

Availability of Raw Materials: The availability of good bauxite ore in close proximity to the smelter will greatly determine the cost of production. Captive power since power forms as much as 35% of the manufacturing cost, uninterrupted power supply in the form of captive power is a key success factor.

Vertically Integrated Operations: Primary Aluminium producing companies, with a presence in the value added segment have a competitive advantage in terms of higher margins. In addition, nearness of the fabrication facilities to the consuming markets will determine freight costs.

ANNEXURE 2

Teaching Note

Disinvestment in Public Sector Enterprise: A Case on National Aluminium Company Limited (NALCO), India

Introduction

In the years following independence, centralized planning was a favored strategy of many governments in the developing world, including South Asia. Development plans were prepared at five-year intervals, and the activities of government centered around the goals and strategies embodied within them. This required an extensive framework of a large number of centralized institutions for planning, management of public service, and supervision of local authorities. Under the scope of reforms, a number of new institutions were created to undertake new functions. Many of the older institutions remained in place, although their functions changed. Many governments in the developing world assumed the responsibility for production and delivery of services. This resulted in a certain pattern of relationship between the governments and various stakeholders.

After independence in 1947, India adopted mixed economy, aiming socialistic pattern of society through heavy investment in the public sector. Public sector had strategic role in the economy for the industrial development in India. Initially, PSEs were restricted to a number of fields but, increasingly, the area of activities were extended across the economy, including non-infrastructural activities, non-core areas, and non-strategic activities such as hotels and manufacturing of consumer goods such as scooters, soft drinks and breeds (Arun, 2006). In 1980s, however, country's performance was less than satisfactory (Arun and Nixon, 2000). By the late 1980s their growth had become an end in itself, absorbing half of the total industrial investment regardless of the low return obtained (Arun and Nixson, 1997). Industrial policy resolution of 1991 cited factors such as poor project management, over manning, lack of continuous technological upgradation, inadequate attention to research and development, and human resource development as reasons for low productivity and efficiency. At times, the impetus for reform came from within the systems while there had also been pressures from powerful external actors (Huque, 2005).

A new government in 1991 initiated a radical economic reform in various sectors of economy to increase wider private sector participation and to increase the efficiency of public sector investment. The policies on disinvestment of Public Sector Enterprises (PSEs) have been major items on India's liberalization agenda. In 1992, GOI established a committee on disinvestments of shares in PSEs. Further, the objective of wider public participation was incorporated in 1994 Disinvestment Schedule. This resulted in enunciation of various policies for restructuring of PSEs, which includes abolition of restrictions on entry to key sectors (for example, petroleum, retailing, refining, etc.), reducing the industries reserved for public sectors, abolition of industrial licensing, disinvestments of GOI holdings in the equity share capital of selected public sector enterprises.

It is worthwhile to note here that the success rate of disinvestment in India is only about 50% (Dhameja, 2006). With liberalization, the role of governments and its relationship with the different stakeholders was changing. However, these changes also carried the potential risk of conflict of interest between public officials, business enterprises and citizens, trade unions, political parties. The Indian government faced criticism for having stronger alliance with foreign investors than local businesses. The social cost of implementing the new measures were very high due to the downsizing and other factors.

ANNEXTURE 2 (Cont.)

Different stakeholders raised their concerns at their respective platforms. Their conflicting principles affect the formulation and execution of the policy. The media has been criticizing government on various issues of disinvestment (Malik, 2003) like lacks consistency in government's approach; lack of accountability; lack of transparency in disinvestment process, failure in communicating reasons of disinvestment to the people and therefore, lack of public support.

NALCO Disinvestment: Issues and Implications

- Issues raised by people at different level while opposing the disinvestment/privatization policy of GOI.
  - Disinvestment policy as a whole.
  - Mode of disinvestment.
  - Direct and indirect benefits incurred by the surrounding community.
  - Intention of government for privatization.
  - Issues raised by different stakeholders like political parties, trade unions, business group, employees, local people, media, business analyst, international agencies.
- Understanding the dynamics of opposition at different level (National, State, Local, and Organizational) and how opposition at one level affects the opposition at other level.

  The disinvestment of the NALCO was opposed right from the beginning. Political parties at centre as well at state were opposing the disinvestment due to ideological differences and political mileage. The pressure of opposition at the center instigated the opposition at the state, local, and organizational level. Moreover, strong opposition from the employees and local people strengthened the stand of political parties.
- Identification and management of stakeholders (their power and interests) at policy formulation and execution level.

GOI frames the disinvestment policies, which changes with the time depending on the ideology of the ruling parties. The case depicts that although the stakeholders do not have say in policy formulation they can influence the execution. For effective implementation of the policy, stakeholders must agree upon the desirable outcomes, and the solutions to the problems need to be determined based on thorough analysis (Huque, 2005). In the case of NALCO, GOI overlooked the vital aspects of planning and implementation of reforms. This resulted in ineffective execution of reform. NALCO employees strongly opposed the disinvestment, acquired the support of political parties and persisted the opposition at the larger level.

ANNEXURE 3

ACRONYMS

AICCTU	All India Central Council of Trade Unions
AITUC	All India Trade Union Congress
BALCO	Bharat Aluminium Company Ltd.
BJD	Biju Janata Dal
BJP	Bhartiya Janta Party
BMS	Bharatiya Mazdoor Sabha
BMS	Bharatiya Mazdoor Sangh
CCD	Cabinet Committee on Disinvestment
CITU	Central Industrial Trade Union
DMK	Dravida Munnettra Kazhagam
GET	Graduate Engineering Trainees
GOI	Government of India
HINDALCO	Hindustan Aluminium Company
HMS	Hind Mazdoor Sangh
IAS	Indian Administrative Service
ICICI	Industrial Credit and Investment Corporation of India
INTUC	Indian National Trade Union Congress
IPO	Initial Public Offer
ITI	Indian Institute of Training
LME	London Metal Exchange
mn	million
MP	Member of Parliament
NALCO	National Aluminium Company Limited
NCMP	National Common Minimum Program
NCMP	National Common Minimum Program
NDA	National Democratic Alliance
PDP	Peripheral Development Program
PSUs	Public Sector Units
SAIL	Steel Authority of India Ltd.
SCOPE	Standing Conference on Public Enterprises
SEG	Standing Empowered Group
TPA	Tonnes per annum
UPA	United Progressive Alliance

Book Reviews

Management of Corporate Greatness

By Pradip N Khandwalla

Dorling Kindersley (India) Private Limited, Licensees of Pearson Education in South Asia, 2008, pp. 371; Price: Rs. 335

ISBN: 978-81-317-0075-5

Management of Corporate Greatness is an important book as it forwards a new paradigm in management and addresses an important question that lies at the heart of economic and managerial science: is it possible for corporations to follow the path of virtuous philanthropic strivings without sacrificing their direct business goal of profit maximization? The book is a meta-research on major civilizational concern of managing greed and goodness together in business world. The book has its origin in a conference on wisdom and courage where the author presents the need for businesses to show 'wisdom', that is, enlightened self interest and to show 'courage', that is, abiding by moral values in business decisions. In this book, the author stresses on the need to manage greatness and prescribes the ways that enable corporations to strive successfully for excellence in the pursuit of both profit and goodness. Various paths of company altruism have been explicated with real life examples that detail on how to pursue them, the benefits accrued and the way forward.

The book is addressed to the whole society that is suffering from ever increasing materialism and greed. The roots of the book lay in the increasing number of reported corporate misconducts and frauds across the globe due to rapacious managerial philosophy of earning profits in any way. The work has gained more relevance in this downturn wherein managers are too stressed on survival and profitability of their organizations and are more likely to be carried away by the easier paths of unfair practices. The author has raised this important issue on business civilization that is being crafted by business institutions and business schools—if it is humane or only mercenary. Alternatively, it is a spiritual awakening call to the worldly man to get out of *maya* or illusion and do the best for society, being a responsible part of it. Since the losses caused by corporate greed surpass employees' and promoters' stakes and dent the image of a nation, it is high time for corporate managers to look within and balance greed with goodness. The concept is based on the Gandhian philosophy of trusteeship. The managers are the trustees of the interest of all the stakeholders including society, owners, customers, investors, and employees. As author has noted, "In making decisions, the purity of means is as much emphasised as the securing of business goals. The emphasis is on honesty, a spirit of sacrifice, commitment to the welfare of others, and dedication to great social ideals".

The national philosophy of regulatory management to check these business misconducts raises compliance cost for companies and regulatory apparatus for the country. Moreover, since the regulatory costs are also associated with regulatory corruption, it is imperative to promote sensitivity towards business ethics within the managers and the corporations.

The corporate misconduct includes bribing government officials, producing poor products, using misleading advertisements, unethical competition practices, employee exploitation (gender or community-based), strong arm tactics to make customer pay, doctoring of accounts, insider trading and wrongfully influencing government policies. The author has quoted the misconduct on part of managers in Worldcom, Enron, Hutton, Kidders Peabody, MiniScribe, Manville Corporation (all US), Livent (Canada), NEC, Mitsubishi, Show (all Japan), Daewoo, Hyundai (both Korean), Parmalat (Italy), BCCI (UK), that have proved to be expensive for majority of the stakeholders. These corporate misdoings had motivated the author to look at ways in which the strength of market economy can be harnessed without stringent regulatory enforcement by initiating a self drive within managers to make their business more humane and successful without losing business values.

The research has identified 70 companies that have succeeded in generating profits by pursuing Corporate Social Responsibility (CSR) and keeping business ethics and values. This set of companies comprised big as well as small companies engaged in manufacturing or service sector and having their presence in both developed and emerging economies. These included large firms like Sony Corporation known for its innovative character that had transformed the image of Japanese products from that of poor to quality products all the while retaining profitability; Tokyo Electric Power Company, Japan; Johnson and Johnson, US for their Corporate Social Responsibility (CSR), Bharat Heavy Electricals Limited for its support to ancillaries and plantation efforts, Day Chocolate, UK for its fair trade practices, participative style of functioning and sharing profits for good causes. Midsized and smaller companies included in the sample were The Body Shop, UK; Ben and Jerry's Homemade Ice Creams, US; Fisher and Peykel, New Zealand, Lupin Pharma, India; SEMCO, Brazil; Alacrity, Tom O' Maine, etc., that maintained their commitment to integrity, business ethics and CSR and remained successful.

The expounded paths of corporate goodness include business ethics, corporate philanthropy, corporate social responsibility, domain development, corporate democracy and corporate spirituality. There can be little economic development without ethics and the need is to look at ways to incorporate appropriate ethical system in business practices that yields profits. Business ethics are the judgemental guidelines of right or wrong. Whatever is the basis of such guidelines—religious norms, or corporate ideology it must be fair towards its stakeholders and should lead to ubiquitous growth and development. Corporate philanthropy is based on the principles of sharing with the disadvantaged by donating for a good worldly cause. CSR is the attitude shown by a corporate as a responsible citizen towards the society from which it benefits in various forms. In the context of emerging knowledge society that is more conscious of socially responsible behavior on part of businesses, CSR can become a competitive differentiator. The forms of CSR proposed in the book favor sustainable development based on environmental management. Domain development involves a corporate commitment towards the development of its industry while corporate spirituality entails a spiritual commitment. Japanese firms, while competed internally within Japan promoted the complete industry outside Japan and helped each other. Corporate democracy is the widest concept including participative style of corporate management, transparent corporate governance, ESOPs, managerial freedom, corporate justice and involvement of staff in management. Each goodness path exposited in the book has been attested by a set of examples and empirical evidences from extant research. Book also discusses on how to manage them and synergize them with the pursuit of business performance.

The research findings from a majority of studies indicate that the corporate goodness pays. The stakeholders at supply and demand side, that is, prospective employment seekers and prospective clients both prefer a firm delegating CSR and even institutional investors look for CSR delegation before deciding on prospective investments. The American banks that delivered CSR were more profitable than others that didn't practice CSR. Among 650 American companies, an increased effort in CSR was rewarded with improved performance. It was also found that CSR leads to reduced financial risk of the company. Such behaviors lead to buoyant market responses. It eventually is a reinforcing cycle of corporate commitment to the society and improved corporate performance.

The existing corporations can be categorized along the two dimensions of corporate performance and corporate goodness as corporate bums (low, low); noble paupers (low, high), corporate mints (high, low) and great corporations (high, high). The book guides the mangers to locate their companies on this matrix and prescribes the steps needed to translate themselves to great corporations. The author also deliberates on the role that needs to be played by the government in order to improve governance such that corporations are automatically directed towards corporate responsibilities and the role that civil society can play in bringing this transformation of market economy to benevolence.

The book is an easy and interesting read with multiple case examples in lucid language and simple representation of models. The important concepts and cases within boxes enrich the lucidity of the monograph.

The work is a significant contribution in corporate strategy research as it introduces a new 'paradigm of management' that creates humane business civilization. The strength of the book rests in its near hundred real life examples, whereby the author moves beyond theoretical preaching and prolifically conveys his message using winning business stories derived out of blending goodness with business. It is a methodological marvel in inductive analysis to develop innovative, empirically relevant theory that reiterates the potency of using multiple and comparative case studies for getting research insights and building theory. The robustness of sample from varied contexts, varied business sizes and business performance in countries at different stages of development convinces the generalizability of the results. The examples that have been given to demonstrate the underlying principles and success stories of each path of achieving corporate goodness are very convincing, however, the practitioner guidelines proposed to pursue each path appears to be very prescriptive and theoretical.

The research findings can serve as a direction and motivation to the new and existing entrepreneurs who fail to find a link between goodness and profits and are often swayed away by the current management paradigms of sustained rents or profitability from business. The book also brings in useful learning for the management schools that are engaged in the lopsided management curriculum focusing on profit generation as the only motive for corporations. The several other paths to corporate goodness given in the book can potentially enrich their curriculum in corporate responsibility and business ethics. It is a guiding light to the confused corporate managers to embark on the paths of corporate philanthropy, corporate social responsibility, business ethics, domain development, corporate democracy and corporate spirituality to produce corporate greatness with goodness.

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Leadership: Theory and Practice

By Peter G Northouse

Sage Publications, New Delhi (2007), pp. 391; Price: $63

ISBN: 978-81-7829-786-6 (PB)

Leadership—has always been a fascinating subject both for practitioners and for students—as well as in the fields of management and other more powerful areas such as politics and military. Every decade has to find new methods of dealing with older concepts and reorient those interested on the challenges peculiar to that decade. The fall of Soviet Union deeply affected the 1990s almost to the point of announcing the conquest of socialism by capitalism. The failure of market mechanism in the last years of the first decade of the new millennium is throwing up a new definition of leadership —and an agonizing reappraisal of both the theory and practice.

The author has made a comprehensive attempt to define leadership based on four approaches: trait, skills, style and situational. Each of these approaches have been dealt in theory as well as practice, illustrated by cases. The book then goes on to a greater depth in analyzing certain theoretical construct, before tackling the transformational leadership and its relevance. An interesting chapter is devoted to women and their leadership perspectives. While there could be some cultural divergences across the globe, the general theory holds, by and large, for all.

While discussing trait approach, the author places it as one of the dominant approaches to leadership in the 20th century. Great leaders such as Mahatma Gandhi or Abraham Lincoln have some traits which can be instruments to understand why they were such influential leaders in their periods. However, later studies influenced trait approach as one which recognizes what is inherent in a leader but also the situational and environmental impact on bending and adapting the trait approach to reality. Intelligence, self-confidence, determination, integrity and sociability are the main components of the trait approach.

Skills approach, on the other hand, looks at qualities which can be learned through training, education and practice. While traits and skills are not opposites, they can be complimentary. In leadership, there is a powerful component in acquiring skills which can be brought to bear on other aspects of a leader's personality. Technical skills should be strengthened by human skills. Unless leaders are able to handle people, technical skills alone will not achieve results. These two aspects will then require conceptual skills in order to get a comprehensive view of the tasks, purposes and results.

While trait approach concerns itself with what leader already has in him, skills approach emphasizes on the capabilities. The style approach focuses on what leaders do. Whatever the trait and skills approaches may deal with, ultimately results emerge on what leaders have done. The style approach fascinated many and there was a time when Blake and Mouton's managerial grid dominated most lectures on leadership. But later researches have not been able to connect style to performance in reasonably precise terms.

The author then goes on to enumerate some relevant theories, emphasizing on the need to transform organizations. Indeed, transformational leadership became a major subject since liberalization and market forces ushered in a global out look and opened up opportunities across the continents. The need to build teams, with strong ethical and cultural overtones, has been explained with appropriate cases.

In a society which is becoming more and more complex, every individual has to take on the role of leadership, at home, at work and in the society. While each may have his or her own moorings, the need to learn the theoretical background and the results of implementing and refining theories becomes even more imperative. Business and management schools have the responsibility to help students adapt to the challenges of leadership as they emerge. Books of this nature will be greatly helpful.

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HRD Score Card 2500: Based on HRD Audit

By T V Rao,

Response Books, New Delhi (2008), pp. 298; Price: Rs. 450

ISBN: 978-81-7829-836-8 (PB)

Human Resource Development (HRD) has become an inevitable part of organizations, in their growth and change. Often referred to as the soul of Human Resource (HR) function, HRD gained business and strategic significance from being a simple function and is undisputedly one of the major contributors in building top class organizations in today's global and highly competitive environment. However, to develop HRD into its proper undertaking, it becomes important for organizations to evaluate various components of HRD through an audit. HRD audit is a comprehensive evaluation of the HRD systems and strategies, structure and competencies, culture and impact in the context of the short-term and long-term business plans of an organization. It examines the alignment of HRD strategies and systems to business goals and challenges. The auditors evaluate, through a HRD score card, as to how well the HRD efforts and strategies drive business goals and their achievement. Thus, HRD score card is an assessment of the HRD maturity level of any organization.

The title of the book *HRD Score Card 2500* is thoughtfully crafted and drawn from the total of the scores assigned to four critical dimensions of HRD in the score card—HRD Systems and Strategies, HRD Competencies, HRD Culture and Values and HRD Impact—that can measure the state of HRD in any organization. The book is comprehensive and practical and gives minute details of how one can conduct an HRD audit. An attempt is made to disseminate the author's 35 years of experience in driving HRD in India and other Asian countries in a coherent, scholastic and simple manner. The "Foreword" is by the well known professor and a friend of the author, Udai Pareek, who gave a background in which the book is written and shares his experience of contributing to the development of HRD along with the author. One reading of the preface is enough to tell the readers what the book is all about.

This book is a commendable addition to the field of study. It is heavily based on an earlier book written by the author—*HRD Audit: Evaluating the Human Resource Function for Business Improvement*. However, it is extremely well-written presenting a systematic and scientific way of measuring levels of HRD through a score card. It is organized into eight units. Unit 1 gives an introduction to HRD Audit and HRD score card. Units 2 and 3 are devoted to the audit of HRD systems and strategies. Unit 4 gives detailed procedures and standards for assessing the HRD competencies of HR staff, line managers, top management and the overall competencies of the HR department or function. Unit 5 presents audit process and standards for assessing the HRD culture and values. Unit 6 presents the detailed procedures for auditing the business linkages and alignment of HRD systems, cultures. Unit 7 presents various questionnaires that can be used for the HRD audit. Unit 8 presents the scoring sheets and scoring system for the HRD audit, and the detailed process for arriving at the HRD score card. Through these chapters, the reader will gain a better understanding of the critical components of the score card that are covered in an adequate manner.

Elaborating on the critical components, the author presents that the purpose of any HRD system is broadly to build the competencies and/or commitment of individuals, dyads and teams, and the entire organizations as a whole through a variety of instruments. He opines that its objective is to build a lasting culture so that employees learn and give their best on a continuous basis. He suggests that the system can be assessed on components like competency mapping, manpower planning, recruitment, induction and integration, performance management, coaching and mentoring, potential appraisal and assessment centers, rewards and recognition, career planning and development, job rotation, training and learning and organization development. Seventy points each for the above 12 areas leading to a total of 840 points are used to measure the HRD system. Further, the author describes the eight areas that are amenable to strategic interventions. One Hundred and Sixty points points with 20 each are allotted to communication, employee engagement, quality-orientation, customer orientation, efficacy, entrepreneurship spirit, culture building, and talent management. Thus a total of 1,000 points are allotted to HRD systems and strategies.

Next, the author concentrates on HRD competencies. The author strongly believes that it is extremely necessary to measure the current competency levels of HR staff as they hold the key for making HR work. The score card identifies five categories comprising of level of competency of HRD staff and the department, learning attitudes of line managers, developmental and empowering styles of top management, and supportive role played by workmen or filed staff, including their repres-entatives and assigns a value of 500 points.

The author then takes up HRD culture and values, the component that has a profound impact on organizational performance. Eight dimensions of openness, collaboration and team work, trust and trustworthiness, authenticity, pro activity and initiative, autonomy, confrontation and experimentation measure HRD values. Leadership climate, motivation, communication, decision making, goals, control, shared values, quality orientation, rewards and recognition, information, empowerment, learning organization, openness to change, CSR, health, safety and work satisfaction and motivation measure HRD culture. Each dimension is assessed on 20 points, thus 500 points are allotted to 25 dimensions of HRD values and culture in the score card.

The final component, the HRD impact and Alignment, is measured in terms of three categories of variables—Immediate impact measured through financial variables indicated by some of the financial results attributable to HR, immediate impact measured through talent management indicators and long-term impacts measured through contributions to intellectual capital formation. The author places adequate emphasis on intellectual capital that has come to lot of prominence in the recent past. A total of 500 points measure the impact.

A commendable aspect of the book is the attention drawn to subtle issues involved in measuring HRD which the author has skillfully brought out. The strength of the book lies in its clarity. The book will equip the top executives and HR professionals of the company with concepts of HRD audit in an integrated manner which would help them to make remedial and timely interventions. It will also serve as a very useful reference volume to researchers and the faculty dealing with the subject.

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Guidelines to Authors for Manuscripts

The South Asian Journal of Management (SAJM) was founded in response to the global needs to know about the current research and practice in the field of management in South Asia and the South Asian needs to network management development institutions and create a forum for promoting cooperative research and constructive dialogue on contemporary issues in South Asian Management.

SAJM welcomes articles on issues of current interest in management, especially in the South Asian context. We publish empirical papers, review papers, executive experience-sharing, research notes and book reviews. All submissions and related correspondence should be addressed to:

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Manuscripts: All manuscripts must be printed in letter quality (font size 12) in double-space on one side of A4 paper with margins of at least one inch on all sides. Authors should submit one soft copy together with one hard copy by post of their manuscripts to the Editor *(SAJM)*.

Cover Page: Manuscript of a paper should have a cover page providing the title of the paper, the name(s), address(es), phone, fax numbers and e-mail address(es) of all authors and acknowledgements, if any. In order to facilitate anonymous review of the papers, please restrict the author-related information only to the cover page.

Abstract: Following the cover page, there should be an 'abstract' page, which should contain the title of the paper, the subtitle 'Abstract' and a summary of the paper in single space, not exceeding 150 words. The text of the paper should not start on this page, but on a fresh page with the title of the paper repeated.

References: References should be cited in the style prescribed in the Publication Manual of the American Psychological Association (4th Edition). Indicate the position of the reference in the text within brackets by the author's last name and the year of publication; e.g.: '(Hooda 1998)' or 'as pointed out by Hannan and Freeman (1977)' if it is part of a sentence. At the end of the text, references should be listed in the alphabetical order of the last names of the authors, with a title REFERENCES. Examples of how the references are to be listed at the end is given below:

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Association of Management Development Institutions in South Asia (AMDISA)

The leading business schools in the SAARC region initiated the Association of Management Development Institutions in South Asia (AMDISA) in 1988. This is the only Association which networks management development institutions across the eight South Asian Nations through exchanging information, facilitating inter-country research initiatives especially at the doctoral level and conducting regional conferences, workshops, colloquia and programs, and thereby providing a forum for interaction among academics and business leaders.

The Association interfaces management schools with corporate leaders interested in management development; promotes professional development of management faculty; and provides institution-building assistance to management schools and corporate management development centers in the region. AMDISA organizes institution-building workshops for Heads of institutions, faculty workshops on frontier areas of management, and inter-institutional cooperative research on contemporary managerial issues in South Asia. It publishes a scholarly academic journal, ***South Asian Journal of Management*** (SAJM) four times a year and a ***Newsletter*** three times a year. AMDISA is recognized by SAARC, the Inter-Government Agency, as a regional professional association with consultative status having 217 members, of which, 186 are Institutional Members, 3 Affiliate Members, 14 Corporate Members and 14 Reciprocal Members. Management development networks all over the world are eligible to become members of AMDISA.

AMDISA is closely associated with National Networks in India like AIMS and has helped establish networks in Bangladesh (AMDIB), Nepal (ADMIN), Pakistan (AMDIP) and Sri Lanka (ASLIM).

Since its inception, AMDISA has organized ten biennial South Asian Management Forums (SAMF) by rotation in all the South Asian (SAARC) countries. The 10th SAMF on the theme "Change and Continuity: Management Prospects and Challenges" was organized at Royal Institute of Management in April 2009. AMDISA has also organized 20 Regional Workshops for Faculty, 13 Regional Workshops for Deans and Directors, 3 South Asian Management Colloquia, 13 Regional SAQS Workshops, and 1 South Asian and 2 country-specific Training Programs. It has also initiated two medium-term quality initiatives, the Commonwealth-AMDISA Regional Doctoral and Post Doctoral Fellowship Program, and the South Asian Quality Assurance System (SAQS). A total of eight regional Fellowships have been awarded. Five reputable Management Schools (4 in India and 1 in Pakistan) have been accredited by SAQS, while 12 more schools (8 from India, 3 from Pakistan and 1 from Bangladesh) are in the process.

AMDISA is the founder-member of global Management Network INTERMAN which hosts a Global Management Forum every four years. The venues for earlier forums were Geneva (1986), Montreal (1990) Barcelona (1994), Chicago (1998) and Bangkok (2002).

AMDISA

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