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Editorial Note

Humor has a unique place in literature, particularly in English literature. Mark Twain, a great Humorist, stated that humor is a great thing, the saving thing, the minutes it crops up, all our irritations and resentments slip away and a sunny spirit it takes their place. Humor is the tendency of particular cognitive experience to provoke laughter. Humor is a broad term that refers to anything that people say or do that is perceived as funny and tends to make others laugh, as well as the mental processes that go into both creating and perceiving such as an imusal stimulus and also the affective response involved in the enjoyment of it stated by Rob H. Martain in his book Psychology of Humor.

The etymology of humor began as a Latin word humors means fluids or liquids. It has a medical connotation. Bharata Muni's Natya Shatra contains humor as one of the nine Navarasa in which it is known as 'Hasya'.

Whether we can use humor effectively in day today activities of the Management? The business cartoon caricatured by Scot Adams appeared in the name of Dilbert induces laughter at worker place. Some of his quotations are worth remembering. They are I can only please one person per day. Today is not your day. Tomorrow is not looking either good. Change is good but you go first. Another business cartoon worth remembering is Mario Mirands business cartoons.

Defiantly, humor has a place in practicing management. Humor has become a recognized asset in the work place. It facilitates communication, builds relationship, reduce stress and induces creativity.

Humor at a workplace is often associated with stress. Stressful employee cannot perform effectively. Humor is greatest stress reliever. Godbrey in the Journal of Women's Health Stated that, "Humor is potentially effective means of coping with the anger. Further he stated that, "One must be careful with its use". Sarcastic or hostile humor can incite additional anger.

A sense of humor is apparent among creative people. Research reflects that creativity and humor is associated with each other. Creative people display interest in humor and also capacity in producing original humor thought. Getzeles and Jackson stated that when ranking a series of desirable traits creative students placed a sense of humor second, whereas of the same intelligence but less creativity ranked it lowest among all the desirable traits. When both groups drew pictures of various themes, over half of the creative students made drawings judged as humorous, and their essay showed the same tendency.

Dr. Babu Thomas
Editor

Foreign Direct Investment Inflow and Socio Economic Development: A Review of Theoretical and Empirical Evidence

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Abstract
Foreign Direct Investment (FDI) has been well introduced globally as a bundle of capital, employment, knowledge and skills. Both, developed as well as developing economies are actively pursuing policies to attract FDI with varying degree of success. The degree of success in attracting FDI depends on the policy stance and other macroeconomic factors of the host economies. The effect of the FDI on the development process and the parameters has been controversial among different host countries. This paper examines some theoretical framework. Empirical evidence on FDI inflow and its impact on socio-economic development in host countries were reviewed. Conclusions were drawn on how the FDI supports the socio-economic development, which may be similar and carry lessons for other (host) countries. The review of literature on theoretical basis; country specific and cross country empirical evidence has been undertaken. This study has revealed that despite substantial research on FDI, there have been very few empirical studies on the linkages between FDI and human resource development, which needs to be addressed / covered by researchers in the future.

Keywords: Balance of Payment, Economic Growth, Employment, Foreign Direct Investment, Human Capital, Spillover Effects

1. Introduction

Foreign Direct Investment (FDI) as a source of private capital has been very common in developed as well as developing countries for the last three decades. FDI has witnessed an increasing trend globally over a period of time. The stock of FDI in developing economies as a percentage of gross domestic product (GDP) was as high as 27.0 in 2005 as compared to 9.8 in 1990 (UNCTAD, 2006). The world FDI inflows increased by 28% from US $558 billions in 2003 to US $711 billions in 2004 and US $916 billions in 2005. Similar trends have been observed in developed as well as developing economies.

FDI is preferred over other private capital resources due to its long lasting prospects and multiple purposes. Compared to "other capital flows" (commercial bank loans, portfolio flows and official flows), FDI flows have been emerging as the largest component of net resource flows to developing countries since 1994 (UNCTAD, 2006). Comparing benefits of private capital inflows Reisen and Soto (2001) suggested that the developing countries should not rely solely on national savings. They suggested recourse to foreign direct investment and portfolio equity inflows to stimulate long-term growth prospects. FDI provides not only the capital component, but is also source of employment, technology, skills and abilities. As compared with loans the special characteristic of FDI is that repayment is made only when the investors earn profit. The profits so earned may be reinvested in the host country. FDI also boosts confidence in the economic and investments environment of the host country. Further, it constitutes as useful component for production activities in the host country that are of much importance for development. Literature supports inward FDI the notion that it promotes trade in the host country.

FDI is also credited to have a positive impact on human capital formation in the host country. Blomstrom and Kokko (2003a) studied the relationship between FDI and human capital by reviewing the literature and concluded that there was a potential for significant "spillover effects" from FDI into the host country, if the level of human capital in the host country is high. Host countries with high levels of human capital may attract technology intensive FDI which in turn may lead to further human capital development.

The above is one side of the picture. The other side of these views cannot be ignored. Marxist political and economic theory views multinational enterprises (MNEs) as an instrument of imperialist domination. The aim of MNEs is to earn profit and repatriate it to the home country and these MNEs have no role to play in technology transfer and employment generation. They have crowding out effects and are a threat for the host country firms. MNEs may also affect balance of payments negatively by importing more input and machinery into the host country. In fact, they may even pose a threat to national sovereignty and autonomy of the host country by influencing economic policies (Hill, 2005).

Despite these mixed arguments, the need for FDI grows continuously. A number of country level and cross countries studies have been conducted to investigate the impact of FDI on host countries from different perspectives. Their findings are mixed and cannot be generalized from country to country or from region to region. Their recommendations do not provide one cure-all problem solution. Here it is noteworthy to emphasize that impacts of FDI on host country are not an automatic process. There are many factors such as macroeconomic environment, political stability and FDI policy stance of the host country that account for maximizing the benefits of FDI. Review of theoretical literature and empirical evidence may help us enhance our understanding about of the effects of FDI in developing host countries. It may also lead to the development of a framework that may help if not for all but for most of the developing countries in capitalizing FDI.

The purpose of this study is to review the theoretical and empirical evidence related to FDI impacts on host countries and to summarize them. Moreover this study would be an endeavor to identify the factors that play a vital role in maximizing the socio economic benefits from FDI and provide guidelines for policy makers. It would also provide opportunities for further research by exposing multiple aspects of FDI.

The rest of the study would deal with:

(i) Section 2: impact of the FDI on economic growth of the host country;
(ii) Section 3: the spillover effects of the FDI on domestic firms;
(iii) Section 4 : the effect of the FDI on balance of payments;
(iv) Section 5: the role of the FDI in employment generation in the host country;
(v) Section 6: the effects of the FDI on human capital formation in the host country; and
(vi) Section 7: conclusions drawn from all previous sections with policy implications and further research.

2. FDI and Economic Growth

FDI in the form of green-field is said to increase competition among producers in the market. Currently this is being observed more for services e.g. telecommunication, retailing and financial services. State owned telecommunication monopoly companies found themselves facing severe competition from the FDIs which provided not only less costly services to the customers, but also led to increased business by providing quick and updated information. Under the pressure of competition, firms invest more in plant equipment and R&D in their endeavour to get advantages over rival firms. Such activity led to increase in productivity, product and process innovation, and economic growth.

In contrast, a subsidiary of a MNE might crowd out indigenous competitors due to its greater economic power and thus monopolize the market. Subsequently, it would be able to raise prices and harm the social welfare of the host economy. Such a monopoly may also be developed by a MNE when it acquires more than one firm and merge them to decrease the level of competition.

Busse and Groizard (2006) studied the linkages between growth rate and foreign direct investment focusing on regulations of the host country. This study indicated that more regulated countries were less able to take advantage of the presence of MNEs.

According to Agosin and Mayer (2000), FDI strongly crowded-in domestic investment in Asia, crowded out in Latin America; while

African countries showed a balanced effect. On the basis of econometric exercises they concluded that FDI does not always have positive effects on the host countries. It was contrary to the common assumption of the FDI's positive effect in developing countries. Only policies of liberalization were not sufficient to ensure positive effects from FDI. Technological infrastructure was essential for absorbing externally generated technology by MNEs. Otherwise the resultant effect would be that the domestic investment might be crowded-out and the local investors might not be able to compete with foreign investors.

Nations receiving large amounts of FDIs do not necessarily result in new capital formation when transnational corporations (TNCs) purchase the existing plant and equipment and reduce the control of domestic capitalist. Mexico is one of the top recipients of FDI where 71 percent of such investment was meant for purchasing already existing Mexican companies in 2001 (Gazcon, as cited in Cypher & Dietz, 2004). When TNCs use funds of host country banking sector, the domestic sector is deprived of the use of local resources. In this way, the FDI does not play a complementary role to domestic investment. It substitutes ownership and control.

In a country specific study conducted by Aitken and Harrison (1999), using panel data from Venezuela over the period of 1976 to 1989, two conclusions were drawn. First the foreign equity participation has positive correlation with productivity for small enterprises (number of employees less than 50). Second, an increase in foreign ownership negatively affected the productivity of wholly domestically owned firms in the same industry. By offsetting the opposite effects, net effects are quite small. Joint ventures' main contribution is in the net effects of foreign investment. Using the panel data in Morocco, Haddad and Harrison (1993) rejected the hypothesis that foreign presence accelerated productivity growth in domestic firms.

Sahoo and Mathiyazhangan (2003) examined the role of the FDI on the growth of the economy of India through export promotion. By using annual data from 1979-80 to 2000-01 and applying Johansen co-integration test, the study found long run relationships among GDP, FDI and export. Moreover export played a better role in economic growth than the FDIs. Therefore they suggested a policy that emphasizes more on open export oriented sectors. Studying the relationship among the FDI, trade and domestic output in Pakistan over the period of 1972 to 2001, Ahmad, Alam, and Butt (2004) detected long run relationship. The results of the study supported export-led growth hypothesis and indicated that domestic firms benefits derived from the FDI through spillover effects mechanism.

Using regional panel data in China, Wen (2007) found that due to different FDI orientation among different regions of China, east China attracted more FDI with resultant increased exports. In addition, there was a rise in FDI-GDP ratio, which led to an increase in east China's share in national industrial value added index. This was reflected in the regional income growth of east China which was affected positively. While in case of central China (which attracted less FDI), these effects were found to be negative. However, the contribution of improved in market mechanism to regional development was evidenced in attracting FDI, in promoting exports and directly contributing to regional income growth.

Zhang (2001) empirically analyzed the role of FDI in China's income growth by using a growth model for cross-section and panel data covering the period of 15 years (1984-1998) from 28 regional units for transitional economies. The study found positive effects of FDI on Chinese economy. Externality effects of FDI were significantly positive and supported the observations that the presence of multinational corporations (MNCs) not only resulted in technology transfer and diffusion but also facilitated China's transition toward a market economy. The findings also supported the assertions of FDI theories that the marginal product of FDI would be greater than that of domestic capital. However, uneven distribution of FDI between coastal and inland regions resulted in widening the regional income gap.

Djankov and Hoekman (2000) investigated the impact of foreign investment on productivity performance of firms in the Czech

Republic during the period (1992-96). This study tested the difference in the total factor productivity (TFP) growth rate of local firms from foreign owned firms (joint venture and directly acquired). TFP was used as an indirect measure of technology transfer. The results of the study suggested that TFP growth of foreign owned firms was higher than that of local firms. Moreover FDI appeared to have a greater impact on TFP growth than that of joint ventures.

Makki and Sumwaru (2004) analyzed the role of FDI and trade in economic growth of 66 developing countries within the endogenous growth theory framework. Using cross section data over the period 1971-2000, they found that FDI and trade contributed to enhance economic growth. The FDI seemed to encourage domestic investment.

A study conducted by Alfaro *et al.* (2006) focused on financial markets of the host countries while relating FDI with economic growth through backward linkages. In a small open economy, foreign and domestic firms compete for skilled and unskilled labour as well as intermediate products. In turn they go for innovated intermediate goods which imply capital cost. This cost must be financed through domestic financial institutions. Then these various innovated intermediate goods lead to positive spillovers to 'final goods' sector. These local financial markets resulted in the backward linkages to turn into FDI spillovers. The authors also found that the same amount of an increase in FDI generated three times more additional growth in the financially well developed host countries than in the financially poorly-developed countries.

Khan (2007) also examined the link between FDI, domestic financial sector and economic growth for Pakistan over the period of 1972-2005. It was found that FDI had positive effects on economic growth both in the short and the long runs if the financial system of host country was developed up-to certain minimum level. These better financial conditions not only attracted FDI in Pakistan but also helped in maximizing the benefits from foreign investment.

The MNEs may play a role in industrial development through FDI by raising the scale of operations in host countries industry upstream and downstream. This occurs due to the forward and backward linkages. Markusen and Venables (1999) in their model, state that the MNEs may affect domestic industry of the host country positively by linkages with local firms. Borensztein, De Gregorio and Lee (1998) found that the FDI has positive effect on the economic growth of the host country, provided that the host country has sufficient stock of human capital and absorptive capacity. According to Lall (1980), the MNEs have positive effect on local firms by demanding high quality inputs, and by providing technology, information and training, and market access.

Balasubramanyam *et al.* (1999) analyzed the role of the FDI in promoting economic growth. They suggest that the size of the domestic market and competitive climate related to local producers play an important role. Moreover, interactions of FDI and human capital have substantial influence on growth promotion.

Hang and Attaullah (2003) studied the impact of human capital on relationship between inward FDI and economic growth in ASEAN and Latin America during 1975-1995. Their results supported two hypotheses; first, there was two ways relationship between the FDI and economic growth, and second, human capital was a positive factor that facilitated this relationship as the FDI contributed to productive capacity and to the shift towards technology-intensive and value added production and exports. It could also help to attract those types of FDI that would promote higher economic growth.

In 2006, Baharumshah and Thanoon carried out an empirical study on the effects of various types of capital inflow on the growth process of East-Asian countries based on dynamic panel data. It was found that these countries felt the FDI's impact on growth, in the short as well as long run. The impact of the FDI was greater than that of the domestic investment. Moreover, countries that were successful in attracting FDI not only invested more but also grew faster than those that discouraged FDI.

Sahoo (2006) studied the impact of the FDI on economic growth, domestic investment and export for five South Asian countries (India, Pakistan, Bangladesh, Sri Lanka and Nepal). The results showed that the FDI had a positive and significant impact on growth in four South Asian countries, except Pakistan. Other supporting factors to growth were exports, gross domestic capital formation and infrastructure.

In 2007, Basu and Guariglia examined the interconnectedness between FDI, inequality (in the level of access to technology in different countries), and growth, empirically as well as theoretically. They used panel data of 119 countries for the period 1970 to 1999 to explore the relationship between FDI and inequality, FDI and growth, and FDI and the share of agriculture in the GDP in the recipient countries. It was observed that FDI promoted both inequality and growth, and had a tendency to reduce the share of agriculture in the GDP in the recipient countries.

Lensink and Morrissey (2006) studied the effect of volatility in the FDI inflow on growth by using cross section, panel data and instrumental variable technique. They found that the volatility in the FDI had a negative impact on growth. Moreover, the evidence for positive impact of FDI on growth was not robust.

From the above, it can be concluded that the FDI can boost economic growth through export promotion, encouraging investment and developing linkages. This relationship can be enhanced if the host country had better stock of human capital, developed financial market, and competitive environment.

3. FDI and Spillover Effects

One of the most commonly discussed aspects in literature of FDI is the spillover effect of MNCs in the host economy. The FDI is considered a channel for transfer of technology from industrialized countries to the less developed countries. This new technology may be incorporated both in the production process and product. As far as the transfer of technology is concerned, the FDI is preferred over licensing when the technology is complex and when experience is required to make the technology operational.

For the purpose of the developmentof the host country an important indicator is the transfer of skills and technology from the TNCs. But this transfer is related to the degree of national linkages between the TNCs and the host economy. Though Mexico has been a major recipient of FDI, research does not suggest that Mexico's national base has either grown or diversified or has it deepened its capital and knowledge skill level to any significant extent (Cypher, as cited in Cypher *et al.*, 2004)

The views on technology transfer seem to be supported by Xu (2000) who investigated United States multinationals as a channel of technology diffusion in 40 countries using the data from 1966 to 1994 and found that technology transfer by the US MNEs contributed to productivity growth in developed countries but not in less developed countries (LDCs). In order to derive any benefit from the technology transfer, the basic requirement for the host country is to have a minimum human capital threshold level. However, most of the LDCs have not reached this threshold yet.

Makki *et al.* (2004) analyzing the role of FDI and trade on growth in 66 developing countries, recognized the FDI as the main channel for transferring technology to developing countries. They also found that stock of human capital might enhance these benefits.

While studying the effect of FDI, Yudaeva *et al.* (2003) compared the productivity of fully owned domestic firms with that of at least partially foreign owned firms in Russia to study the spillovers from foreign owned firms to domestic firms. Foreign owned firms were found to be more productive than the Russian firms owned due to access to technology and better management for the former. However, the productivity of foreign owned firms did not vary in proportion to the size of foreign stake. The reform orientations of the regions not only played the role as a determinant of foreign investment but also influenced productivity of the foreign firms. Firms were more productive in more reform-oriented regions than those in less reform oriented regions. Positive spillover effects of the technology and the management practices were observed on domestic firms in the same industry but the foreign firms had a negative effect on firms in vertically related industry. Poor quality of supplies distorted the vertical relationship. This negative spillover on vertically related firms appeared less significant with the passage of time. Smarzynska (2003) examining the firm-level data from Lithuania supported the results that the positive productivity spillovers from the FDI took place in upstream sectors through linkages between foreign affiliates and local suppliers. But horizontally, there was found to be no indication of spillovers.

Using a large range of Chinese manufacturing firms, Liu (2008) showed that an increase in the FDI lowered the short term productivity level but raised the long term rate of productivity growth of domestic firms in the same industry. Investigating the effects of the FDI on productivity level, as well as the rate of productivity growth in domestic firms, he found that the level-effect resulted in a decline in the productivity level, and the rate effect led to a gain in productivity. But the rate-effect dominated the level-effects in the long run and the domestic firms benefited from the presence of foreign firms (intra-industry spillovers) in the same industry. Regarding vertical spillovers, he found that spillovers through the forward and the backward linkages had similar effects on the productivity of domestic firms. But the backward linkages seemed to be statistically a more important channel through which spillover occurred.

Aitken and Harrison (1999) using panel data from more than 4000 plants in Venezuela covering the duration 1976-1989, found no evidence supporting the existence of technology spillovers from foreign firms to domestic firms. Khan (2007) also observed similar results for Pakistan during the period 1972-2005. However, he attached positive externalities from the FDI, with the attainment of certain minimum level of development of domestic financial conditions.

Blomstrom and Kokko (2003a) reviewing the literature, concluded that there was a potential for significant "spillover effects" from FDI into most countries, but this potential was associated with the stock of human capital, the interest in local firms of promoting skills transfer, and a competitive environment.

Blomstrom and Kokko (2003b) suggested that investment incentives to foreign firms only were not an efficient way to raise national welfare. Spillovers of technology, the main motive for these incentives could be realized only when the local firms have necessary absorptive capacity. Therefore, it is necessary to support learning and investment in local firms as well.

In 2001, Hanson focused on whether spillovers associated with the production by multinationals justify FDI promotion policies. As far as the impact of the FDI on host countries is concerned, there are weak evidences that the FDI generates positive spillovers for host countries. Moreover, at plant level, there is little evidence that the FDI raises the productivity of domestic enterprises. Literature gives the impression that countries should be careful about claims that promoting FDI will raise their welfare.

Djankov and Hockman (2000) suggested that parent firms transferred more know-how to their affiliates than joint venture firms obtained from their partners. When joint ventures and FDI were taken together, they had a negative spillover effects on firms having no foreign partnership in each industry. But FDI separately had positive impact on all other firms in an industry. Negative spillover effect of joint ventures might be due to the absence of absorptive capacity in them.

Lipsey (2002) found mixed evidence for spillovers to local firms' productivity. It depended on host country policies and environments and on technological levels of industries. The impact of FDI in promoting the growth of the host country exports and linkages to the outside world was clearer. In some cases it has been shown that the FDI played a role in transforming host economies from being exporter of raw materials and foods to being exporters of manufactures (including in some cases, high tech manufacture). In simple words the FDI not only increased the exports quantitatively but also qualitatively.

Overall, however, the spillover impact of the FDI showed a blurring picture. From the evidence, it might be judged that transfer of technology depends on linkages between MNEs and locally owned firms, absorptive capacity, human capital level and the policies of the host country, and interest displayed by the firms in promoting skills.

4. FDI Effects on Balance of Payments

The effect of FDI on the balance of payments of the host country has been seen to be controversial. One view is that the FDI might affect balance of payments positively by the inflow of the initial capital, substituting import and contributing to exports.

The capital account of the host country is positively affected by initial capital inflow. But this is a one-time-only effect because the FDI may subsequently lead to the outflows in the form of the earning to parent firm which could impact the capital account negatively. The FDI is considered as a substitute for imports for the host country and can help improve the capital account. However, the imports of input material and machinery offset the advantage of import substitution. For example, the FDI by the Japanese automobile companies in the United States and the United Kingdom can be taken as substitutions for the imports from Japan. But with import of many component parts from Japan, the positive impact of the FDI on the current account of the U.S. may not be as great as initially supposed (Hill, 2005).

Foreign exchange problems commonly restricts the less-developed nations from expanding into foreign markets. Widening the market (which is one of the functions of TNCs) can allow the firms to realize economies of scale in production. Lower cost may translate into lower prices and in turn the lower income consumers could be brought into the fold of the market. Consequently, the TNCs might impart export skills to domestic producers.

In the framework of the neoclassical theories, the FDI influenced China's manufacturing exports in terms of volume as well as in structure. China's rank in exports in the world improved from 26th in 1980 to 9th in 1998. During this period, the volume of China's exports increased from US $ 18 billion (47% of exports as manufactured goods) to US $ 184 billion (89% of exports as manufactured goods). Exports by Foreign-Invested Enterprises (FIEs) rose 66.7 percent annually over the period 1980-98 (SSB, as cited in Zhang, 2001).

Blomstrom and Kokko (1996) reviewed the empirical evidence on the FDI effects such as transfer of technology, trade performance, competition and industry structure in the host countries. They concluded that the MNCs could play a vital role for productivity and export growth in the host countries. They observed that the impact of the FDI varied from industry to industry and from country to country. According to Hill (1990) and Naujoks and Schmidt (1995), foreign owned firms tend to export a great proportion of their output than do their locally owned counterparts. Sahoo (2006) recognized the positive impact of the FDI on export growth through its positive spillovers in South Asian countries.

The empirical evidence suggests that the positive impact of the FDI on exports of host countries is more than that on imports. If the problems of balance of payments occur, it would likely be small (WTO, 1996). Khan and Kim (1999) empirically tested the impact of the FDI on exports from Pakistan and suggested that the FDI inflow was more towards import-substitution industries than towards export oriented industries. Consequently the FDI worsened the balance of trade in Pakistan.

The TNCs might use transfer pricing techniques in response to the restrictions imposed by the host country government on repatriation of funds. This technique might be more harmful for less developed nations where the tax collection system is weak (Cypher *et al.* 2004).

The parent companies from the developed would advance make loans to their subsidiaries in less-developed countries. Repayment of such loans with interest (an amortization) causes a potential drain on the balance of payments and foreign exchange earnings of a less developed country. Unless the subsidiary is earning foreign exchange via exports or by contributing to import substitution in the host country, the outflow of principal value and interest can exceed the original inflow of financial capital, thus creating a net outflow over time. (Cypher *et al.* 2004).

If the Japanese automobile companies in the United States and the United Kingdom (which are advanced countries technologically) could not show remarkable positive impact on exports, then it is difficult to say that the FDI may have positive impact on the balance of payments in the developing countries, where, the machinery and the input material have to be imported. Moreover, the transfer pricing technique and other tactics of capital outflow seem to worsen the balance of payments in developing countries.

In Asia, China is an example of a success story of the FDI recipient countries. But it is worth mentioning that half of its FDI came from Hong Kong (neighbour) and China's capital outflow was channeled to Chinese firms located in Hong Kong and then back to China as the FDI.

5. The Role of MNCs in Employment

Employment is one of the issues that is discussed between the MNCs and the government of the host country. The FDI effect on employment can be observed directly when the MNCs employ a number of persons from the host country. With the presence of the MNCs, the production capacity of the local suppliers increases, leading to the creation of new jobs and so indirect effects arise. But the other side of the picture is different as Hill (2005) describes:

"Cynics argue that not all the "new jobs" created by FDI represent net additions in employment. In the case of FDI by Japanese auto companies in the United States, some argue that the jobs created by this investment have been more than offset by the jobs lost in U.S. owned auto companies, which have lost market share to their Japanese competitors. As a consequence of such substitution effects, the net number of new jobs created by FDI may not be as great as initially claimed by an MNE (p.246)."

When an MNC acquires an enterprise, initially it reduces employment for efficiency purpose during the restructuring period. When this duration is over, the growth rate in employment might increase at a faster pace than in the domestic enterprises. Hill (2005) supported this view as under:

"An OECD study found that between 1989 and 1996 foreign firms created new jobs at a faster rate than their domestic counterparts. In America, the workforce of foreign firms grew by 1.4 percent, compared to 0.8 percent per year for domestic firms. In Britain and France, the workforce of foreign firms grew at 1.7 percent per year, while employment at domestic firms fell by 2.7 percent. The same study found that foreign firms tended to pay higher wage rates than domestic firms, suggesting that the quality of employment was better (p.247)"

McDonald *et al.* (2002) investigating the role of the FDI in promoting employment in host region of the European Union (EU), developed a theoretical framework which suggested that the initial influence of the FDI on employment was weak and mostly created low skilled jobs with the loss of employment in host economies due to the displacement of domestic output by increased exports from parent companies of subsidiaries. However in the long run, operations of the subsidiaries were diversified and thereby induced a change in the pattern of jobs in the host country.

The world's top 100 non-financial MNEs employed 14.3 millions of total 1.8 billion people employed in the world as a whole in 2000 that is less than one percent of the total world employment (UNCTAD 2001). But at country level this percentage differed. The MNEs accounted for less than 10 percent of the manufacturing employment in Portugal, Turkey and Japan while this figure was over 40 percent in the countries like Hungary, Argentina and Ireland (Narula and Marine, 2003).

Fazekas (2000) examined the nature and determinants of regional distribution of foreign investment enterprise (FIE) employment in Hungary. It was concluded that regional distribution of the FDI inflows was strongly influenced by educational level of local population. A self-reinforcing process was observed there: the FDI was attracted to the regions where unemployment was lower due to better educational levels and geographical advantages (regions adjoining the Western-Slovakian, Austrian and Slovenian borders) while an increase in the FDI in turn created new job opportunities.

Structural economists argue that TNCs employ capital-intensive production system that is not favourable for labour abundant, poor nations, where real rate of unemployment and underemployment may be alarmingly high. This capital-intensive production system increase unemployment and underemployment in urban areas. Moreover, some of the top level manager and university level graduates try to get jobs in TNCs. They leave local industrial and agricultural firms with relatively narrow cadre of management talent and perhaps may not always the best-trained (Cypher et al., 2004).

Jayaraman and Singh (2007) undertook an econometric study of the impact of the FDI in Fiji for the period of 30 years. They investigated the relationship between employment and foreign direct investment for Fiji through multivariate modeling strategy by including GDP. They found unidirectional long-run causality running from foreign direct investment to employment and unidirectional causality running from foreign direct investment to GDP in the short-run.

Export Promotion Zones (EPZs) have attraction for foreign companies. Nations develop Export Processing Zones (EPZs) to gain foreign exchange, labor-intensive manufacturing and assembly processes, creating new jobs which can be very important to the host nations (Cypher *et al.* 2004).

From the evidence discussed above it may be concluded with weak robustness that FDI may generate net employment in the host country. However, a high level of human capital may play positive role in enhancing this relationship.

6. Effect of FDI on Human Capital Formation

Human Resource as one of the determinants of the FDI inflow, is considered a vital factor for economic growth and development of a country. Human capital level is one of the factors that determine competitiveness of an economy for attracting the FDI. The stock of human capital is considered not only prerequisite for attracting the FDI but it also increases the absorptive capacity for technology, skills and abilities from multinational enterprises (MNEs).

Khan (2007b), analyzing the FDI in South Asian countries, indicated that countries with developed human resources attracted higher FDI. He also suggested that the South Asian countries needed to develop market-driven knowledge and skills to get benefit from the FDI flows by shifting preferences toward tertiary education, vocational and technical training and R&D.

Alfaro *et. al.* (2006) emphasized the importance of market structure and indicated the importance of the human capital as an absorptive capacity for the FDI to have an effect on economic growth. Yudaeva *et. al.* (2003) recognized the value of human capital for attracting FDI as well as for absorbing spillover effects.

As far as human capital formation from the FDI is concerned, some countries have been able to mobilize MNCs more effectively than others due to many reasons e.g. trade orientation, rates of employment, percentage of the FDI in domestic investment, the level of trade unionism and organized labour, training incentives and linkages between public and private sectors. It was also found that mere existence of the FDI would not result in transfer of technology and scientific skills. Cooperation among government, industry, academia, and labour would lead to creation and transfer of high quality and quantity of skills. Moreover, the FDI will be more beneficial when it comes after the developing countries have created a sufficient pool of human capital (Ritchie, 2002).

Evidence from the literature suggests that the FDI and human capital formation have complementary effects as supported by Zhang (2001). But a question "Do skills attract FDI or does FDI create skills?" remained debatable. Noorbakhsh, Paloni and Youssef (2001) found that the level of human capital was a significant determinant of FDI inflow. Similarly Xu (2000) argued that host country should have a minimum threshold of skills before the arrival of TNCs. It would enhance the absorption capacity and facilitate transfer of technology. Korea and Taiwan followed this pattern. But in Southeast Asia, MNCs came before the creation of a pool of intellectual capital. Was Southeast Asia trapped in a low-skill equilibrium? The answer seemed to be no. According to Slaughter (2002), there was strong evidence that MNCs increased demand for skilled workers through technology transfer from parent firms to their subsidiaries.

When a host country gets a continuous flow of the FDI through attracting higher value-added MNEs, it enhances skill level of preexisting MNEs in the host country and the domestic enterprises. These upgraded skills further attract the FDI and so it becomes a virtuous circle (Miyamoto, 2003).

Gachino (2006) examined the role of the foreign presence, the FDI and the firm level capabilities in human capital development in three manufacturing industries of Kenya. Human capital development was found to be different in each of the manufacturing industries. A high positive correlation was observed between the FDI and the human capital development. The countries which were technically backward like Kenya were likely to have the FDI play a positive and significant role in human capital development. Foreign firms that were large in size generated higher human capital development than that of locally owned firms. Foreign firms enjoyed higher level in process and product technology and marketing performance than that enjoyed by the locally owned firms. In the manufacturing sector in Kenya the FDI presence was seen to result in some technology spillovers being absorbed by domestic firms.

Aitken *et. al.* (1999) found no evidence in Venezuela in favor of the argument that over a long period, the FDI increased the stock of human capital through labour mobility. Mitchie (2002) studied the impact of the MNEs on human capital enhancement in developing countries. This impact appeared not to be a function of the MNEs, but it was found to be a result of the government efforts to attract the FDI by enhancing human capital. Literature has suggested that public education is the best way to enhance human capital. MNEs are not likely to provide such education.

Narula *et. al.* (2003) found that the MNEs subsidiaries in Argentina hired more professionals than the domestic firms of the same size; possessed a more skilled labour force overall; and spent more on training than similar domestic firms. Higher labour productivity and higher wages were observed to be prevalent in these MNEs subsidiaries. But when measured in terms of knowledge creation and utilization, little difference was found between the affiliates and the domestic firms. The benefit of the MNE activities in the Argentine economy was not reflected in the domestic firms' value added growth. Moreover, the results indicated that the domestic firms, which efficiently internalized more spillovers, had a larger investment in absorptive capacity.

Kapstein (2002) outlined some of the recent arguments made by economists regarding the relationship between the FDI, human capital formation and growth within the emerging market economies. The theory of FDI's contribution to the economic growth of the emerging economies via the human capital formation remained controversial due to two reasons. First, in most countries the FDI accounted for only a small share of the GNP and the total employment, and so its impact on national educational and economic performance was unlikely to be great. Second, the FDI increased wage disparities and that factor might undermine the contribution of the FDI to growth. It was argued that only political economy might lead countries away from sustained growth. In countries lacking well developed capital and education markets, many otherwise qualified citizens might be denied the basic skills they needed to contribute fully to the nation's economic development. As the demander and the supplier of labour, the multinational firms might influence educational outcomes in the market where these firms did business. Their interaction with local educational establishment would be largely a function of domestic political and economic forces.

Miyamoto (2003) concluded by reviewing the literature on the FDI and human capital formation that adult population of the host country should have at least basic schooling to attract any type of FDI. In order to attract high value-added MNEs, it seemed necessary to develop tertiary education sector with close collaboration with the industry so as to formulate demand driven programmes. MNEs can contribute to human resource development of the host developing country by providing training and supporting formal education. Large domestic firms and MNEs invested more in training as compared to small and medium size domestic firms. MNEs contributed to technology transfer through horizontal and vertical linkages, labor turnovers and spin-offs. The host country efforts to improve absorptive capacity have also been observed to facilitate technology transfers. Government policies have been important to facilitate training, to minimize financial constraints and market failures and to promote MNEs to invest in human resource development (HRD) of the host economy. Little evidence of virtuous circle of inward FDI, HRD, and technology transfer was found. A government that emphasized flexible demand-driven HRD strategies targeted MNEs in high value-added areas, and coordinated education and training policies were more likely to lead the country into virtuous circle.

Empirical results by Slaughter (2002) on links between inward FDI and within industry skill upgrading for both developed and developing countries indicated robust positive correlation between skill upgrading and presence of affiliates of the US multinationals. This correlation was even stronger among the sub-sample of developing countries.

Majority of the evidence from above literature supports the argument that the FDI and human capital mutually interact. But host country intervention and many other factors are essential that may enhance this interaction.

7. Conclusions

Both the theoretical and empirical evidence reviewed in this paper reveal mixed views about the FDI impact on socio–economic development of the host countries. The critical analysis made by various writers/ researchers based upon the experience of different host countries indicated that FDI may enhance growth through promoting exports, encourages investment, and linkage effects. Better stock of human capital and developed financial markets may add to these effects. Moreover the FDI is likely to have spillover effects if the host country has absorptive capacity and the local firms have linkages with the MNCs. For the developing countries, the FDI impact on the balance of payments was found to be, more or less, lacking. There is evidence (with weak robustness) in favour of generation of net employment by the MNCs. However, higher level of human capital in the host countries does play a role in employment. The relationship between FDI and human capital was observed to be of an interactive nature, but interventions of government were found to have key role in it.

As far as policy implication is concerned, this paper suggests that the FDI impact on socio-economic development of the host countries is not an automatic process. The government of the host country however, has to intervene to control transfer pricing, monopoly of the MNEs, and outflow of capital. The government should direct the MNEs to take input from local contents and to export certain percentage of manufacturing. The government should open export oriented sectors for FDI, make arrangement for developing linkages between MNEs and the host country firms, encourage the MNEs for training of employees, provide MNEs with access to capital market, and coordinate with industry and academia to formulate demand driven human capital.

It is hereby suggested that this is a very vast field for further research and is context dependent. Different policies, macroeconomic environment, endowment of resources and competitiveness of a country encourage us to conduct studies empirically at regional and country level. The studies at sector, firm and plant level may enhance our insight about spillover effects, employment and training and development of human resources.

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Shareholder Wealth Gains in Corporate Merger Announcements in India

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Abstract
The present work analyses the merger announcement effects from the view point of Indian acquiring and target firms. Employing a broad-based sample of acquiring firms, the study finds negligible (0.008%) returns on announcement and negative overall CAR (2.79%) to the shareholders of acquiring firms in a 41-day event. Though the merger announcement generates positive returns, the overall CAR (10.39%) is negative for the shareholders of the target firms. The 3-day window generates positive returns to the shareholders of both the firms. The target shareholders earn a CAR of 4.38% while the acquiring shareholders earn 0.64%. Since returns due to merger announcements are highly transient in India and shareholders of merging firms are better off by selling shares immediately rather than holding them.

Key words: Abnormal Returns, Acquisitions, Market Model, Mergers, Window Period

1. Introduction

Do mergers generate abnormal returns to shareholders? This question has occupied a lot of academic space in research studies carried out in the US and other countries. By and large the conclusions show that mergers are beneficial to the shareholders of target firms than to the acquiring firms. The shareholders whose company is bought end up richer, while the shareholders of the buyer seldom do (Bogan and Just, 2006). Target shareholders earn significantly positive abnormal returns from all acquisitions and acquiring shareholders earn negative abnormal returns from mergers (Loughran and Vijh, 1997). In the short-term to medium term, fewer than half of all mergers add value (Bogan and Just, 2006).

Despite these high risks involved, the mergers have not shown any decreasing trend the world over. The US has witnessed merger waves at frequent intervals while in other countries the mergers are on the rise. Mergers in India, too, are following the lead of the global trend in mergers. The liberalisation policies unleashed since 1991 have resulted in business consolidation and streamlining through the process of M&A. Indian firms are acquiring not only local firms but have developed a big appetite for the cross-border deals. The Tata Steel acquisition of British-based Corus Steel is a best example followed by Hindalco acquisition of the US-based Novelis. The total value of M&A and Private Equity deals announced in 2008 was $41.54 billion which decreased to $21.2 billion in 2009. There were 766 deals in 2008 and 488 in 2009. Forty per cent of total deals were outbound deals in India in 2009.

In view of the growing number of merger announcements in India, it becomes incumbent to ascertain the excess returns involved in merger announcements. Do all the merger announcements generate positive returns for both the acquiring and target firms' shareholders? Though several studies in India have examined the announcements returns, the present study makes a comprehensive computation for both the acquirers and the target firms over long and short event windows.

The paper is organised into several sections. In Section 2 a review of the literature is given followed by the description of sample and methodology in Section 3. Section 4 gives the analysis of the results of the study. Section 5 concludes.

2. Review of literature

The phenomenon of corporate mergers has always been a complex one. The financial research in mergers has attempted to analyse this phenomenon with a view to identify the rationale involved in mergers, gains to acquiring and target firms, post-merger performance of acquiring firms, risks involved in mergers, determinants of merger activity, financing policies employed, merger waves, etc.

Jensen and Ruback (1983) argue that mergers and acquisitions create social welfare by allowing the most efficient distribution of corporate assets. They report that successful acquiring firms earn an average risk-adjusted excess return of 3.8% in acquisitions and approximately 0% in mergers. However, these results were challenged by a flood of event studies finding negative returns to the shareholders of acquirers during 1970s and 1980s. Generally these studies demonstrated that the mean returns to acquirers pursuing acquisition strategies were significantly negative, with only approximately 35% of acquisitions being met with positive market returns on announcements (Bogan and Just, 2006).

Cummins and Weiss (2004) analyze M&As of European insurance industry over the period 1990-2002 and find that European mergers and acquisitions created small negative cumulative average abnormal returns (CAR) for acquirers and substantial positive CAR for targets. Moeller et al. (2005) examine a sample of 12,023 acquisitions by public firms from 1980 to 2001 and find that shareholders of these firms lost a total of $303 billion when acquisitions were announced, i.e. -$25.2 million per acquisition. The study finds that the acquisitions by small firms are profitable for their shareholders, but these firms make small acquisitions with small dollar gains. Large firms make large acquisitions that result in large dollar losses. Acquisitions thus result in losses for shareholders in the aggregate because the losses incurred by large firms are much larger than the gains realised by small firms. Roughly, shareholders from small firms earn $9 billion from the acquisitions made during the period 1980-2001 whereas the shareholders from large firms lose $312 billion.

Most merger event studies find that, in the long-term, acquiring firms are found to experience negative abnormal returns (Scherer, 1988). Franks et al. (1991) find no evidence of significant abnormal returns over a three-year period after the last bid date. However, Agarwal et al. (1992) find that tender offers are followed by insignificant abnormal returns, but mergers are followed by significant abnormal returns of -10% over a five-year period after the effective date.

A number of explanations have been offered as to why the stock price of firms announcing an acquisition can be negative. Roll (1986) hypothesizes that managers of bidding firms may suffer from hubris, so they overpay. Travlos (1987) points out that firms with poor returns generally pay with equity, and Myers and Majluf (1984) show that firms that issue equity signal that the market overvalues their assets in place (the equity signalling hypothesis). A related hypothesis, formalised by McCradle and Vishwanathan (1994) and Jovanovic and Braguinsky (2002), is that firms make acquisitions when they have exhausted their internal growth opportunities (the growth opportunities signalling hypothesis). Jensen (1986) argues that empire-building managements would rather make acquisitions than increase payouts to shareholders (the free cash flow hypothesis). Recently, Dong et al. (2002) show that firms with higher valuations have worse announcement returns. This could be because highly valued acquirers communicate to the market that these high valuations are not warranted by fundamentals, perhaps because they are undertaking efforts to acquire less overvalued assets with more overvalued equity (the overvaluation hypothesis). Finally, Mitchell et al. (2004) show that there is a price pressure effect on the stock price of the bidder for acquisitions paid for with equity because of the activities of arbitrageurs (the arbitrage hypothesis).

Several studies have related method of financing mergers and merger success. A firm may use cash or shares or a combination of these two in financing mergers and acquisitions. In a world where managers possess private information that shareholders do not, Myers and

Majluf (1984) show that a firm will issue stock only when it is overvalued. It follows that firms will prefer to pay cash if their stock is undervalued. Loughran and Vijh (1997) classify their sample of 947 firms on the basis of the mode of acquisition (mergers or tender offer) and the form of payment (stock or cash). Both variables have been examined in the context of wealth gains from acquisitions. The mode of acquisition may be related to the expected wealth gains resulting from operating synergies and the disciplining of target managers. Mergers are usually friendly deals that enjoy the co-operation of incumbent managers. Tender offers are made directly to target shareholders, often to overcome resistance from incumbent managers and indicate greater confidence in the acquirer's ability to realise efficiency gains from the acquisition. In the overall sample of 947 cases, acquirers that make merger bids earn, on average, 15.9% less than matching firms whereas acquirers that make tender offers earn an 43% more than matching firms during a 5-year period after acquisition. Similarly, stock acquirers earn 24.2% less than matching firms whereas cash acquirers earn 18.5% more than matching firms.

Martin (1996) shows that the form of payment is partly endogenous to the mode of acquisition. Mergers are more often financed with acquirer's stock whereas tender offers are predominantly cash financed. The study also shows that stock acquirers have lower book to market ratios and a superior historical growth record, which raises the possibility that the acquirers' managers may become overly optimistic about their firm's growth opportunity. Fishman (1989), Berkovitch and Narayanan (1990) and Eckbo et al. (1990) expand on this idea and show that higher valued bidders will use cash or a higher proportion of cash to signal their value to the market. However, if the bidder is uncertain about the target's value, the bidder may not want to offer cash, since the target will only accept a cash offer greater than its true value and the bidder will have overpaid.

Fuller et al. (2002) study shareholder returns for firms that acquired five or more public, private and/or subsidiary targets within a short-time period. Using a sample of 3,135 takeovers, they find that bidders have significantly negative returns when buying public targets and significantly positive returns when buying private or subsidiary targets. When the bids are partitioned on method of payment, they find that acquisitions of public targets result in insignificant bidder returns for cash or combination offers but significantly negative returns to the acquirers when stock is offered. However, for private and subsidiary targets, acquirer returns are significantly positive regardless of the method of payment. These acquirer returns accompanying bids for private firms and subsidiaries are greater for bids financed with equity than for bids financed with cash.

Several empirical studies have been carried out in India on various aspects of mergers, like announcement returns, long-term share price performance, post-merger effects, characteristics of firms involved in mergers, effect of industrial shocks on merger performance, etc. Bhaumik and Selarka (2008) find that, on an average, M&A in India results in reduction in firm performance. Taking a sample of unrelated firms of the period 1995-2002 the study shows that the mergers neither add to the profitability of the firms nor create value for shareholders. Employing a merger sample of 56 firms for the period 1994 to 2002, Singh and Mogla (2008) compare pre and post-merger performance of merged companies. The study finds a decline in the post-merger performance of merged companies. However, they find that the profitability of matching firms also declined significantly over the same period and conclude that the decline in profitability cannot be attributed to mergers alone.

Pawaskar (2001) analyse the post-merger performance of acquiring firms in India based on a sample of 36 mergers in the period 1992 to 1995 and find no improvement in post-merger performance of acquiring firms. The study finds an increase in leverage as the only significant gain to the acquired firms. Satish Kumar and Bansal (2008) observe an improvement in financial performance in only 60% of the acquisition cases in post-merger period. Pathak and Mishra (2006) analyse the merger effect on market power of acquiring firms in

Pharmaceutical Industry and find no evidence of market power synergy to combined firms. Vanitha and Selvam (2007) and Mantravadi and Reddy (2008a) analyse the merger effect on the financials of the acquiring firms on similar lines. Vanitha and Selvam (2007) find no change in the overall financial performance of merged companies in respect of 13 variables taken for the study. On the other hand, Mantravadi and Reddy (2008a) find a fall in the six financial variables selected by the study for evaluating post-merger performance of acquiring firms. In another study, Mantravadi and Reddy (2008b) analyse post-merger performance over 6-year period for horizontal, vertical and conglomerate mergers in India. The study finds a fall in operating profit margin, gross profit margin, net profit margin, ROE and ROCE for all the three types of mergers in post-merger period.

Agarwal and Bhattacharjea (2006) analyse the influence of industry and regulatory shocks on merger activity in India. The study finds clustering of merger activity at industry levels in response to industry and regulatory shocks. The repeal of Monopolies and Restrictive Trade Practices Act had positive and significant effect on merger behaviour of firms in India. Agarwal and Sensarma (2007) investigate the role of industry level factors in determining merger activity in an emerging economy. The results from logistic and count data regressions suggest that growth opportunity, concentration and cash flow are important determinants of merger activity. Rajesh Kumar and Rajib (2007) analyse the characteristics of acquiring and target firms employing a sample of the period 1993-2004. They find that acquiring firms have higher cash flow, P/E ratios, book value, liquid assets and lower debt to total assets which are statistically significant when compared to target firms. The acquired firms were smaller and had lower P/E ratios, dividend payouts and growth in sales and assets.

Mishra and Goel (2005) analyse returns to the shareholders in RIL and RPL merger for 41-day event window. The study finds overall negative returns for both the firms. Though the announcement day AAR for RIL was 0.81% and for RPL it was 4.98%, the announcement day CAR is -4.48% and -3.97% for RIL and RPL respectively. The overall CAR for RIL was negative at -3.54% while it is positive for RPL at 0.39%. Manoj and Singh (2008) analyse the wealth effect of five mergers in the Indian banking sector and find positive and significant wealth effect for bidder and target banks. In a major study on wealth creation by merger announcements, Rajesh Kumar and Panneerselvam (2009) analyse the announcement returns from the point of view of acquiring and target firms employing a sample of 252 acquirer and 58 target firms involved in acquisitions, and 165 acquirer and 18 target firms involved in mergers for the period 1998-2006. The study finds that mergers create more benefits for target firm shareholders than for acquiring firms. The 3-day CAR is 10.3% for target firms as against 1.79% for acquiring firm investors. On the other hand, under the acquisition situation the gains are limited to both types of firms; the 3-day CAR being 1.15% for acquirer and 0.07% for target firms. Gupta (2008) analyses the merger effect on the wealth of target firms' shareholders and finds a positive AAR of 0.68%, significant at 5% for 30 sample target firms. The announcement day CAR and overall CAR are also positive and are estimated at 9.47% and 4.55% respectively.

In conclusion, it can be said that the empirical analysis in India yields results on similar lines, i.e., mergers create more gains to the target firms' shareholders than to acquirer firms and that the post-merger operating and financial performance of combined entity is not satisfactory. The present study is an extension of such an analysis to a larger sample size of mergers of recent years. The main objective of the study is to find the short-term returns to the shareholders of both acquiring and target firms. It employs both short and long-windows, namely, 41-day and 3-day and would seek to test the wealth gains to the shareholders in both the windows. Such an analysis could help shareholders to devise an appropriate strategy for value maximisation. Positive returns in both the windows would mean that shareholders gain more by holding the investment in merging firms or by increasing the exposure. On the other hand, gains only in short-window would help the shareholders to minimise the losses by exit option.

Where

$$s(AR_{jt}) = \sqrt{\sum_{t=-220}^{t=-21} (AR_{jt} - AR_j)^2 /200}, \qquad and$$

$$AR_j = \frac{1}{200} \sum_{t=-220}^{t=-21} AR_{jt}$$

The test statistic for any given day is given by

$$Z_t = \sum_{j=1}^{N_t} AR_{jt} / (N_t)^{-1/2}$$

Assuming that the standardized excess returns are independent and identically distributed with finite variance, Z is distributed standard normal for a large N_t.

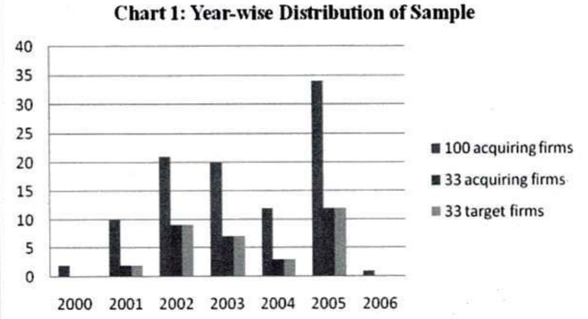
4. Analysis of Results

Table 1 shows the year-wise distribution of sample of merger firms. The sample includes more mergers of the period 2002 to 2005, i.e., almost 87% of the total sample size. Chart 1 shows the pictorial depiction of the distribution of the sample:

Table 1 : Year-wise Distribution of Sample Firms

Year	No. of Mergers		
	100 Acquiring	33 Acquiring	33 Target
2000	2	-	-
2001	10	2	2
2002	21	9	9
2003	20	7	7
2004	12	3	3
2005	34	12	12
2006	1	-	-
Total	100	33	33

Chart 1: Year-wise Distribution of Sample



4.1. Announcement Returns for 100 acquiring firms

Table 2 shows the abnormal returns on account of merger announcements in India for 100 sample acquiring firms for 41-day event period.

Table 2 : Announcement Returns of Mergers in India

Window period	AAR (%)	t-test	CAR (%)	% of Cos with +ve AAR
-20	-0.40	-0.32	-0.40	42
-19	0.23	1.51	-0.16	54
-18	-0.23	0.37	-0.40	46
-17	0.02	2.08**	-0.38	50
-16	-0.05	0.36	-0.42	45
-15	-0.35	0.49	-0.77	50
-14	0.44	2.25**	-0.34	54
-13	-0.06	1.00	-0.40	46
-12	0.21	2.44**	-0.19	56
-11	-0.56	-0.12	-0.75	39
-10	0.10	1.34	-0.65	50
-9	-0.21	1.40	-0.86	50
-8	-0.53	0.03	-1.39	49
-7	0.61	2.52**	-0.78	55
-6	-0.17	-0.38	-0.95	47
-5	0.16	0.56	-0.78	47
-4	0.18	0.80	-0.61	52
-3	-0.38	-0.19	-0.98	48
-2	0.22	1.64***	-0.76	49
-1	-0.03	0.84	-0.80	49
0	**0.008**	**1.73*** **	**-0.79**	**53**
1	0.11	1.52	-0.68	51
2	-0.43	-0.009	-1.11	46
3	-0.46	-0.39	-1.58	42
4	-0.11	0.19	-1.68	45
5	-0.36	-0.72	-2.04	43
6	-0.18	-0.32	-2.23	40
7	-0.64	-0.70	-2.86	43
8	0.04	0.62	-2.82	40
9	-0.34	0.16	-3.16	43
10	-0.27	0.36	-3.43	45
11	-0.07	-0.02	-3.50	41
12	0.82	2.53**	-2.69	56
13	-0.02	0.30	-2.71	47
14	0.05	2.15**	-2.66	53
15	-0.20	1.52	-2.86	56
16	0.004	0.71	-2.86	50
17	0.37	1.24	-2.48	46
18	0.24	1.03	-2.24	56
19	-0.45	0.17	-2.69	43
20	-0.10	1.32	-2.79	47
Avg	-0.07	0.78	-1.53	
Std dev	0.32	0.93	1.07	
Sqrt	0.03	0.093	0.11	
t-test	-2.13	8.42*	-14.34	

*, ** and *** indicate significance at 1%, 5% and 10% levels respectively

The market reaction to merger announcements by acquiring firms in India is almost negligible. In other words, there is neither gain in wealth nor loss of wealth i.e., mergers are value neutral. The AAR is 0.008%, significant at 10% level. This is in conformity with the results observed in other countries, that mergers do not create any wealth to the shareholders of acquiring firms. The most of the broad-based, risk-adjusted studies on mergers (Mandelkar, 1974; Langetieg, 1978; Dodd, 1980, Asquith, 1983) show that the shareholders of bidding firms either gain a small statistically insignificant amount or, in the study by Dodd (1980) lose a small significant amount from the announcement of a merger bid.

The lack of returns to the bidding firms' shareholders could mean that the market is fully efficient and reflects the total information. There is evidence to this effect as AAR is positive on 5th, 4th and 2nd day in pre-announcement period. However, it is very difficult to argue that the market reflects fully all the merger related information. The lack of market reaction could also mean the market's disinterest in merger announcements or lack of difficulty to comprehend or understand the synergy effects of mergers. It would also mean that the market for mergers is perfectly competitive and the existence of competitive bidders drive away all the synergy gains from the ultimate winners by extracting the maximum price to the target firms. Weston et al. (2001) note that zero returns to bidders are consistent with a competitive corporate control market in which firms earn 'normal' returns in their operations.

The CAR on the announcement day as well as for the entire event period is negative, i.e., -0.79% and -2.79% respectively. There is an increase in negative reaction to merger announcements by acquiring firms in India in post-announcement period. Mishra and Goel (2005) find negative announcement day and overall CAR for RIL, acquiring firm. They document an announcement day CAR of -4.48% and overall CAR of -3.54% for the similar event window. However, Rajesh Kumar and Panneerselvam (2009) find a negative overall CAR for acquiring firms involved in acquisitions and a positive CAR for acquiring firms involved in mergers.

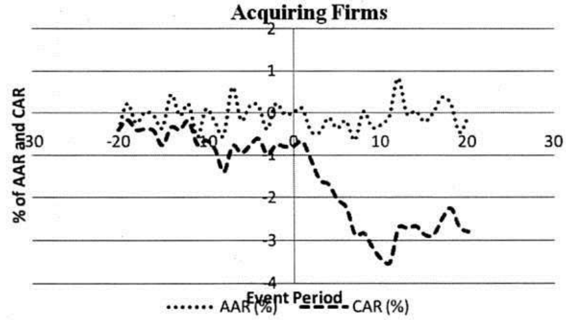
The negative CAR on announcement day shows a continuous rising trend till 11th day in post-announcement period. From a high of -3.5% on 11th day it decreases to -2.79% by the end of 20th day in post-announcement period. Since overall negative CAR is higher than the announcement day negative CAR the long-term investors would lose more on account of merger announcements in India than short-term investors. An investor who sells on the announcement day is better off in India than the one who holds the shares of acquiring firms on long-term basis. The latter investor would lose almost 51%, on annualized basis, for 20-day period.

Dutta and Jog (2009) find similarly for Canadian mergers. The study finds positive announcement day AAR and CAR. The announcement day CAR for 989 merger cases was 0.8% and 3-day CAR was 1.3%. However, the market subsequently corrects for its initial positive reaction to news of the acquisition. There are significant negative abnormal returns on day +6 (-0.27%) and day +10 (-0.28%). Further, CAR values become insignificant in 15 days after the announcement date. Moeller et al. (2005) find that from 1991 to 2001 (the 1990s), acquiring firms' shareholders lost an aggregate of $216 billion, or more than 50 times the $4 billion they lost from 1980 to 1990 (the 1980s). They show that a large part of this loss has occurred from 1998 to 2001 wiping out all the gains made earlier. They ascribe this loss to the announcement of large deals in the latter part of the 1990s. The large loss deals accounted for 43.4% of the money spent on acquisitions from 1998 to 2001. Large loss deals have a negative average abnormal return of -10.6%. Moeller et al. (2004) find a positive CAR of 1.10% for 3-day window, but CARs differed between large and small firms. The large firms, announcing large deals, recorded a 3-day CAR of 0.076% compared to 2.318% by small firms announcing small deals.

As far as the distribution of number of companies with positive AAR on the announcement day, the study finds that the returns are not widely distributed. There are only 53% of the acquiring firms generating positive returns on the announcement. For days prior to and subsequent to the announcement day, this percentage is higher.

Chart 2 presents the pictorial depiction of the movement of AAR and CAR for 100 acquiring firms in India.

Chart 2: Movement of AAR and CAR of 100 Acquiring Firms



4.2. Movement of AAR and CAR in various sub-periods

The movement of AAR and CAR in 41-day event window is further analysed by its analysis over various sub-periods. The study considers -20 to -11, -10 to -1, -1 to +1, +1 to +10, +11 to +20, +1 to +20, and other sub-periods. The data relating to these periods is presented in Table 3.

Table 3: Movement of AAR and CAR in sub-periods

Days	AAR (%)	t-test	CAR (%)	p-value
-20 to -11	-0.56	-6.61*	-0.75	0.0001
-10 to -1	-0.03	-1.50	-0.05	0.1689
-1 to +1	0.11	0.20	0.08	0.8598
+1 to +10	-0.27	-4.78*	-2.64	0.0010
+11 to +20	-0.10	6.67*	0.64	0.0001
+1 to +20	-0.10	-10.23*	-1.10	0.0001
-7 to +7	-0.64	0.82	-1.48	0.4268
-5 to +5	-0.36	-0.89	-1.10	0.3936
-3 to +3	-0.46	-2.99*	-0.97	0.0306

*** indicates significance at 1% level**

The movement of AAR and CAR in all sub-periods of 41-day window has been negative except in -1 to +1 sub-period. The positive returns in -1 to +1 sub-period are not only negligible but are transient. An increase in the sub-period to -3 to +3 or -5 to +5 makes returns negative. This again indicates that short-term investors can make some money out of sale of shares of acquiring firms than long-term investors.

4.3. AAR and CAR for 3-day event period

Gregor et al. (2001) opine that the most statistically reliable evidence on whether mergers create value for shareholders comes from traditional short-window event studies, where the average abnormal stock market reaction at merger announcement is used as a gauge of value creation or destruction. They consider three days immediately surrounding the merger announcements, that is, from one day before to one day after the announcement as one of the two popular event windows. In view of this importance of 3-day event window, the study computes the 3-day window period based AAR and CAR. Table 4 presents the data relating to these aspects.

Table 4: AAR and CAR for 3-day window

Window Period	AAR (%)	t-test	CAR (%)	% of Co with +ve AAR
-1	-0.004	-0.135	-0.004	46
0	**-0.040**	**1.465**	**-0.045**	**50**
1	0.129	0.705	0.084	50
Avg	0.028	0.679	0.012	
Std dev	0.089	0.801	0.066	
Sqrt	0.052	0.462	0.038	
t-test	0.546	1.468	0.310	

The investor suffers an average insignificant loss of 0.04% on the announcement day even in 3-day event period. This again proves that acquirers have no gains around the announcement date, but there is no evidence of significant losses (Franks et al. 1991). The returns become positive on +1 day. As a result, the overall CAR is positive and is 0.08%. The CAR for 41-day window is -2.79% compared to a positive CAR of 0.08% in the 3-day window. Since market reacts negatively in the post-merger announcement period, the investor would be better off to sink his investment immediately than to hold it.

4.4. Announcement returns for both acquiring and target firms

In previous pages the returns were computed from the point of 100 acquiring firms' shareholders. Do mergers benefit target firms' shareholders? We examine this question in the following pages. In view of lack of price data, the study restricts the target firms sample size to only 33. These firms are compared with their 33 acquirers in computing abnormal returns. Table 5 presents information relating to AAR and CAR of 33 acquiring firms.

Table 5 : AAR and CAR of 33 Acquiring Firms

Window Period	AAR (%)	t-test	CAR (%)	% of Co with +ve AAR
-20	-0.89	-1.16	-0.89	39
-19	-0.25	-0.15	-1.14	58
-18	0.01	0.18	-1.13	42
-17	-0.48	-0.36	-1.61	39
-16	-0.05	0.38	-1.66	45
-15	0.14	0.48	-1.51	48
-14	0.43	0.76	-1.08	48
-13	-0.12	0.07	-1.20	42
-12	-0.46	-0.58	-1.66	39
-11	-0.66	-0.90	-2.32	30
-10	-0.19	0.34	-2.51	42
-9	-0.90	-0.95	-3.41	39
-8	-0.46	-0.14	-3.87	51
-7	-0.11	0.60	-3.98	45
-6	-0.88	-2.08**	-4.86	39
-5	-1.11	-2.20**	-5.97	27
-4	-0.03	0.10	-5.99	48
-3	-0.53	-1.15	-6.53	42
-2	0.65	1.57	-5.88	51
-1	-0.44	-0.44	-6.32	36
0	**1.31**	**2.41****	**-5.01**	**52**
1	-0.43	0.06	-5.44	39
2	-0.43	-0.50	-5.87	36
3	-1.21	-2.21**	-7.08	33
4	-0.66	-1.09	-7.74	42
5	-0.81	-1.76***	-8.54	24
6	-0.99	-1.69***	-9.53	24
7	-0.43	-0.38	-9.96	39
8	-0.02	-0.10	-9.99	33
9	-0.72	-1.14	-10.71	30
10	-0.32	-0.36	-11.02	39
11	-0.76	-1.50	-11.78	27
12	-0.19	-0.81	-11.97	42
13	-0.35	-1.16	-12.32	30
14	0.12	0.72	-12.20	51
15	-0.41	-0.92	-12.62	42
16	-0.10	-0.00	-12.72	54
17	0.21	0.70	-12.50	45
18	-0.08	-0.09	-12.58	39
19	-0.08	-0.18	-12.67	48
20	-0.08	-0.35	-12.75	42
Avg	-0.31	-0.39	-6.79	
Std dev	0.48	0.97	4.27	
Sqrt	0.08	0.17	0.74	
t-test	-3.69	-2.30**	-9.13	

***, ** and *** indicate significance at 1%, 5% and 10% levels respectively**

The announcement day return has been positive and statistically significant at 1.31%. However, both the announcement day CAR and the overall CAR are negative. CAR increases from -5.01% on the announcement day to -12.75% by the end of the window period. Further, the CAR is negative in almost all the days of 41-day window period indicating the market's negative reaction to the merger decisions.

Table 6 provides information relating to AAR and CAR of 33 target firms for 41-day window period. The target firm shareholders earn a significant announcement day return of 2.18% in India. However, this euphoria is not sustained on long-term basis. The announcement day and the overall CARs are negative. In fact, the negative CAR of 1.31% on the announcement day increases to -10.39% by the end of the window period. Further, the positive announcement day returns are also not fairly distributed across all target firms. There are only 58% target firms with positive announcement returns. Since there are negative returns over the period, it can be said here that the short-term investors would suffer lower loss than the long-term investors. The study has made a similar conclusion for shareholders of acquiring firms. Thus, in general, merger announcements do not improve the wealth of shareholders in India over a longer window.

Table 6: AAR and CAR for 33 target firms

Window Days	AAR (%)	t-test	CAR (%)	% of Co with +ve AAR
-20	0.65	0.50	0.65	48
-19	0.47	0.87	1.12	52
-18	-1.35	-1.81***	-0.23	33
-17	0.76	0.92	0.53	52
-16	-0.85	-0.54	-0.32	36
-15	0.05	0.62	-0.28	48
-14	-0.12	-0.16	-0.40	39
-13	0.01	0.70	-0.39	45
-12	-0.35	-0.07	-0.74	55
-11	-0.25	-0.34	-1.00	52
-10	0.13	0.03	-0.86	52
-9	-0.35	0.26	-1.22	48
-8	-0.79	-0.10	-2.00	36
-7	-0.53	-0.28	-2.53	39
-6	0.54	1.18	-1.99	45
-5	0.27	1.12	-1.72	52
-4	0.26	1.27	-1.46	58

-3	-2.12	-1.87***	-3.58	33
-2	-0.67	-0.95	-4.25	39
-1	0.77	0.88	-3.47	45
0	**2.18**	**5.24***	**-1.31**	**58**
1	1.34	0.82	0.04	58
2	-1.61	-3.02*	-1.57	39
3	0.08	-1.41	-1.49	42
4	-1.26	-1.23	-2.75	45
5	-1.64	-1.44	-4.39	33
6	-0.05	-0.037	-4.44	45
7	0.35	0.43	-4.10	55
8	-0.52	-0.52	-4.62	58
9	-2.28	-2.03**	-6.90	36
10	-1.31	-1.53	-8.21	33
11	-0.24	-1.02	-8.45	58
12	-0.88	-0.99	-9.33	55
13	-0.61	-0.92	-9.94	39
14	0.82	1.87***	-9.11	67
15	-0.074	-0.72	-9.19	39
16	-1.09	-1.56	-10.28	30
17	0.28	0.05	-10.00	55
18	-1.58	-1.80***	-11.58	24
19	0.66	1.14	-10.92	58
20	0.54	0.32	-10.39	45
Avg	-0.25	-.15	-3.98	
Std dev	0.94	1.40	3.93	
Sqrt	0.15	0.22	0.61	
t-test	-1.72	-0.68	-6.48	

***, ** and *** indicate significance at 1%, 5% and 10% levels respectively**

Charts 3 and 4 depict the pictorial movement of AAR and CAR for both acquiring and target firms.

Chart 3: AAR and CAR for 33 Acquiring Firms

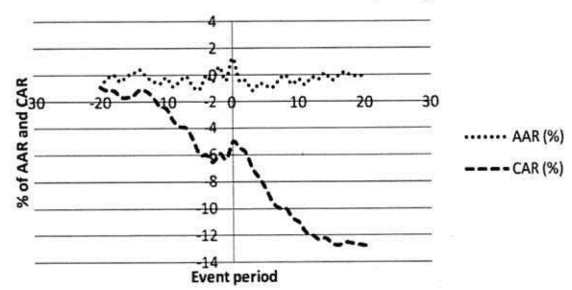
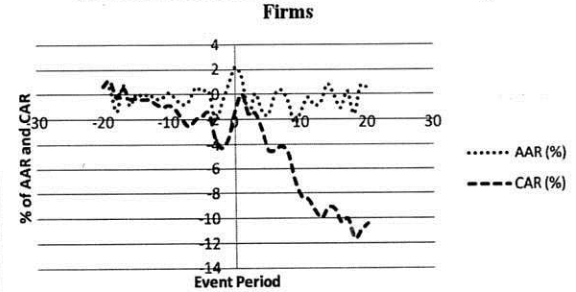


Chart 4: Movement in AAR and CAR for 33 Target Firms



4.5. Movement of returns in various sub-periods for acquiring and target firms

A further attempt is made to decipher the movement of AAR and CAR of 33 acquiring and target firms by classification of returns into various sub-periods. Table 7 presents the returns by several sub-periods:

Table 7: AAR and CAR for sub-periods for acquiring and target firms

Sub-periods	Acquiring Firms			Target Firms		
	AAR (%)	t-test	CAR (%)	AAR (%)	t-test	CAR (%)
-20 to -11	0.56	-6.61*	-0.75	-0.25	-0.50	-0.99
-10 to -1	-0.03	-1.50	-0.05	-0.77	-3.71*	-2.50
-1 to +1	0.12	0.20	0.08	1.34	2.60*	4.29
+1 to +10	-0.27	-4.78*	-2.64	-1.31	-3.20*	-6.90
-11 to +20	-0.10	6.67*	0.64	0.54	-5.80*	-2.18
-7 to +7	-0.64	0.82	-1.48	0.54	-6.89*	-9.08
-5 to +5	-0.36	-0.89	-1.90	-1.64%	-1.68***	-2.40

*** and *** indicates significance at 1% and 10% levels respectively**

Barring -1 to +1 sub-period, for all other sub-periods in both the pre and the post announcement periods and for both the acquiring and the target firms there are negative returns. The negative returns are higher in longer sub-period than in shorter sub-period which again proves that short-term investor would lose less than the long-term investor in firms involved in mergers in India.

Sudarsanam et al. (1986) find 13.96% positive returns for target shareholders and a negative return of 1.26% for bidder shareholders, both significant at the 1% level for the UK. In the post-announcement period day +1 to +40, targets receive a 5.58% CAR (significant at 1%) whereas bidders suffer a negative CAR of 3.56% (significant at 1%). Over -20 to -1, CAR to targets is 9.98% (significant at 1%) and to bidders 0.55% (not significant). In conclusion, the study finds negative returns for bidders in the UK but positive returns for the target firms. The bidders suffer both in the pre and the post-announcement periods. Cheung and Shum (1993) find for Hong Kong target firms positive AAR and CAR on the announcement day. The announcement day AAR is 5.51% while the CAR on the announcement day is 15.21%. However, the overall CAR in the 30-day post-announcement period for target firms decreases by 9.59%. The AAR and CAR both on the announcement day and overall were negative for the bidding firms. The announcement of merger brings a negative reaction of 0.21% for bidders while the overall CAR was -16.1%. In India, though announcement day CAR is positive for target firms, the overall CAR is negative for both the bidding and the target firms.

4.6. Returns for 3-day window for Acquiring and Target Firms

Since the short-term event window is one of the popular methods of appraising excess returns, the study computes these returns for both the firms involved in mergers. Table 8 shows the details.

Table 8 : AAR and CAR for 3-day window for Acquiring and Target Firms

Event days	Acquiring Firms				Target Firms			
	AAR (%)	t-test	CAR (%)	% of Cos with + AAR	AAR (%)	t-test	CAR (%)	% of Cos with + AAR
-1	-0.45	-0.33	-0.45	33	0.67	0.75	0.67	49
0	1.38	2.48**	0.93	54	2.65	5.68*	3.32	58
+1	-0.30	0.09	0.64	42	1.06	0.59	4.38	58
Avg	0.21	0.75	0.37		1.47	2.34**	2.79	
Std Dev	1.02	1.52	0.73		1.05	2.90*	1.91	
Sqrt	0.59	0.88	0.42		0.60	1.67***	1.10	
t-test			0.89				2.53**	

***, ** and *** indicates significance at 1%, 5% and 10% levels respectively**

The AAR is positive on the announcement day for both the acquirers and targets. However, AAR becomes negative on +1 day for acquirers and remains positive for the target firms. The overall 3-day CAR for target firms is 4.38%, much higher than the 0.64% recorded for acquiring firms' shareholders. This is a testimony to the empirical evidence available in the US and the UK that target firms' shareholders reap a larger part of the benefits of mergers than the acquiring firms' shareholders.

Firth (1980), Dodd (1980), Eckbo (1983), Malatesta (1983) and Ruback (1983), etc., document a significant and positive wealth effect for the shareholders of the target firms. On the other hand, Dodd (1980), Firth (1980), Franks and Harris (1989), etc., report short-term negative returns for the acquiring firms' shareholders. Dodd and Ruback (1977), Asquith (1983), Eckbo (1983) and Dennis and McConnell (1986) indicate small but positive abnormal returns to the acquiring firms' shareholders.

5. Conclusions

Mergers, in general, do not create any wealth to the shareholders of the acquiring firms. If there are any gains involved in mergers, they are reaped by the shareholders of the target firms. The present study finds similar conclusions for the Indian merger cases of recent years. The studies find overpayment and managerial hubris as prime reasons for the mergers to fail to generate benefits to the shareholders of the acquirers. Do Indian managers overpay or suffer from hubris hypothesis? This particular question needs to be investigated in detail and forms a further research area in the field of mergers and acquisitions.

If the results for 41-day and 3-day windows are juxtaposed, the returns appear to be negative for both the firms in the longer window while there are positive returns for both in the shorter window. The study finds 0.64% CAR for the 3-day event period while a negative CAR of 12.75% for the 41-day window for the 33 acquirers. For the larger sample of 100 acquiring firms the CAR in the 41-day period is -2.79% while for the 3-day it is 0.84%. This clearly indicates the ephemeral nature of merger returns. The market reacts favourably in the immediate period of announcement of the merger but reverses its valuation as more details are available and analysed over various aspects of the merger deal. The transient nature of the merger returns can create a delicate position for the holders of equity of the firms involved in the mergers. Should the investment be held or sold-off? A sale brings some relief while holding negates the value for the shareholders of both the firms. What would be the position of the shareholders if the investment is held beyond 41-day, say, 1-year, 2-years, etc? This is a separate issue and needs a detailed analysis. There are very few studies which have analysed on these lines in India.

There are other determinants of bidder firm returns. The present study makes a general analysis of announcement returns without classifying mergers on the basis of the type of mergers, sectors, motives, methods of payment and characteristics of the firms involved in the mergers. The study opines such an analysis is very much necessary to understand the whole phenomenon of the merger returns in India.

Testing Jensen's (1986) free cash flow hypothesis, Lang et al (1991) find that low *q* firms with high free cash flows earn negative returns than high *q* firms with high free cash flows. Travlos (1987) and Asquith et al (1987) find that bidders' returns decrease with the fraction of the premium to be paid in the bidder's common stock. In other words, cash mergers perform better than stock-based mergers. The relative size of the firms involved in the mergers also influence the extent of the returns involved in the mergers. Returns are higher for the larger-size bidder than the small-size bidder relative to the size of the target firms. Similarly, firms undertaking related mergers would report positive returns than the firms undertaking unrelated mergers. The empirical evidence reports that the diversification destroys corporate value (Jensen, 1986). An analysis on these lines for Indian mergers is very much required to understand the reasons behind the negative returns reported by the bidding firms.

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Attitudes of Green Consumers Towards Environment-Friendly Apparels and Food Products: A Comparative Analysis Between South Asia and UK

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Abstract:
An important challenge facing marketers today is to identify the attitudes of green consumers. The surging growth of the green consumer, which is reflected in the increased consumption of organic food and clothing, has created a whole new level of understanding in the respective industry. It has been identified that the market for ethical clothes in the UK rose by 79% to £52m whilst spending for organic products have increased by 18% (Corporate Bank consumer Report 2007). The objective of this study is to correctly profile the green consumer, as identifying these consumers would help marketers in taking the necessary strategies in order to capture this segment. Besides identifying the green consumer, further research has been carried out in order to examine whether there are differences or similarities in consumer buying behaviour caused by different geographical locations (South Asia and UK). The purpose of this research is to correctly profile the green consumers from the non-green consumers and to study their underlying attitudes and behaviour towards organic foods and clothing. Values, environmental knowledge, behaviour and attitudes are used as variables in separating both types of respondents. Again, price, design and organic materials have been used as variables in determining consumers' attitudes towards organic clothing and health, contents, price and organic have been used as variables in determining consumers attitudes towards organic food products.

Keywords: Attitudes, Consumers, Environmental Friendly Products, Green

1. Introduction

Concern for the environment has increased significantly during the past few decades and as a result people's values and attitudes towards nature have changed substantially. Throughout the 1980s it was thought that the only way to solve the world environmental problems was to cut down on consumption but the green consumption issue was not at the forefront of marketers concern. However, in recent years, consumer began to seek environmentally friendly alternatives in preferences to their usual product purchase (Schlegelmilch, 1994), thus the green movement was born. A recent consumer survey conducted by Mintel (2008) in the UK revealed that half of its respondents are worried about the current state of the environment and hence are willing to make sacrifices such as convenience, or costs for better environmental condition. A recent report also shows that consumer interest in the environment and the impact of the brands they buy may be the highest in the UK compared to any other international market (Mintel, 2008) while adding that 61% of the British now consider ethical issues when shopping, according to survey of Co-operative Bank Consumer Report (2008). Two such sectors that have gone green and ethical nowadays are the apparel and food industries.

Organic clothing, once categorised as being fashionably tasteless is now hailed as being fashionably chic, even green is now coined as the new black. Fashion, which has always been viewed as an industry that promotes the use of fur, materials made of processed fabrics and only concerned with looking good, has now changed. The global organic cotton apparels, home and personal care products market topped US$ 1 billion in 2007, with estimates projecting a doubling of that amount by the end of 2010 (Organic Exchange, 2007). An additional finding also shows that the market for ethical clothes in the UK rose by 79% to £52m during 2007 (See Table-1.1) (Co-operative Bank's Consumers Report, 2007). The increase in consumption is quite astounding as eco friendly clothes are always priced at a higher level due to its higher production process. This finding provides as evidence supporting the growth of ecological favourable consumer behaviour.

Table 1.1: Ethical Personal Products

	Spend (2006)	Spend (2007)	% growth (2006-2007)
Ethical Personal Products			
Ethical clothing	£29m	£52m	79%
Ethical cosmetics	£317m	£386m	22%
Charity shops	£411m	£359m	-13%
Buying for re-use-clothing	£421m	£360m	-14%
Clothing boycotts	£281m	£338m	20%
Real nappies	£5m	£7m	40%
Total	**£1,464m**	**£1,502m**	**3%**

Source: Co-operative Bank's Consumers Report, 2007

This upward trend in the consumption of organic apparels has fuelled more fashion goods companies going into green. High street labels such as H&M and Topshop have embraced this trend by using organic cotton in their collection. Marks & Spencer is also embracing this change by going ahead full speed to change the way they work, with their aim to be carbon neutral by 2012. Meanwhile, the organic food industry has been on the rise as well with annual sales of organic foods and drinks in the UK hitting £2 bn in the year 2008 (Mintel 2008). Soil Association Organic Market Report sales were up by 22% compared to the previous year. The increased spending on organic products has made the UK the third largest organic foods market in Europe behind Germany and Italy (BBC, 2007). Moreover, data from the Cooperative Bank's Consumer Report (2007) shows that spending for organic product has increased by 18% in 2007. Although the demand is increasing the supply of home-grown organic food is not growing fast enough to meet this demand. This has resulted in more farmers converting to organic. In January, 2008, there were 4,639 organic producers in the UK, representing an annual increase of 7% from previous year (Mintel, 2008).

Table 1.2: Organic Food

Ethical Food & Drink	**Spend (2006)**	**Spend (2007)**	**% growth (2006-2007)**
Organic	£1,473m	£1,737m	18%
Fair-trade	£195m	£285m	46%
Free-range eggs	£240m	£259m	8%
Free-range poultry	£100m	£116m	16%
Farmers' markets	£210m	£225m	7%
Vegetarian products	£639m	£664m	4%
Freedom-Food	£16m	£17m	6%
Sustainable fish	£17m	£55m	224%
Dolphin friendly tuna	£218m	£223m	2%
Food & drink boycotts	£993m	£1,214m	22%
Sub-total	**£4,101m**	**£4,795m**	**17%**

Source: Co operative Bank's Consumers Report, 2007

1.1. Justification of the Study

With the surge in green consumption it is vital that marketers first segment the market according to the levels of environmental purchase and target the green consumer segment (Schlegelmilch, 1994). Therefore, profiling the green consumer is a vital step that companies must undertake in order to be market leaders in their prospective industry. Research has shown contradictory findings on environmentally conscious behaviour. For example, knowledge is recognised as one main characteristic that influences all phases in the decision process (Alba and Hutchinson, 1987) therefore consumers' decisions are driven by the knowledge that they possess when purchasing a product. Past study however, conducted by Maloney and Ward (1973) shows that the correlation between consumer ecological knowledge and ecologically favourable behaviour does not exist. This finding contradicts a recent study (Chan, 1999) where correlation between knowledge and behaviour does exist. The differences in this finding show that there is not one set of actions that could determine consumer behaviour pattern when purchasing environmentally friendly products; many factors should be taken into account. Therefore, in order to gain a better understanding, further research needs to be carried out to examine the profile of the green consumers and various factors affecting their buying decisions, motives and attitudes towards environmentally friendly products.

1.2. Research Objectives

Thus the research objectives in this study:

- Provide a comprehensive background on the profile of the environmentally friendly consumers.
- To get a more comprehensive background on the buying behaviour, motives and attitudes of the consumer in the developed and developing countries on environmentally friendly products.
- To compare the differences and/or the similarities between consumers' buying behaviour in the UK and South Asian countries (India, Pakistan, Bangladesh and Sri Lanka) and provide a comprehensive and detailed analysis.
- To reveal the similarities and the differences in the environmentally friendly and non-environmentally friendly consumers' attitudes and behaviour towards green clothing and organic food products.

2. Literature Review and Hypotheses Development

2.1. Environmentally Friendly Consumers

Over the last 20 years there have been many attempts to classify the environmentally conscious consumers. According to Webster (1974) the socially conscious consumer can be defined as a consumer who takes into account the public consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about social change. Thus consumers who consider the environment to be important will therefore evaluate the environmental consequences associated with the purchase of a product (Follows and Jobber, 2000). Some of the earliest studies related to the profile of the green consumers can be traced back to the early 1970s. Most of these studies have tried to measure the green consumers based on their demographic categories such as sex, age, education and social class. Overall the combined results (Berkowitz and Lutterman 1968; Laroche *et al.* 2001) of their studies have profiled the green consumers as female, pre-middle aged, with a high level of education (i.e. at least high school graduate) and have above average socioeconomic status. However, Schlegelmilch (1994) argued that there is very little value in the use of socio-demographics characteristics for profiling the environmentally conscious consumer, as weak relationship was uncovered. As an alternative, researchers have tried to measure the green consumers based on other construct namely personality. A majority of the researchers have agreed that personality variables such as knowledge, values, behaviour and attitudes have been found to have higher linkages in explaining ecologically favourable behaviour (Banerjee and Mckeage, 1994; Chan 1999; Laroche *et al.* 2001; Webster, 1975).

Over the last five years, researchers investigating environmental responsibility have been interested in combining aspects of the Theory of Reasoned Action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975) with personal values. A hierarchy of values-attitudes-intention-behaviours has served, as the conceptual framework for a number of studies (Ajzen and Fishbein; 1980; Follows and Jobber, 2000) and as such is used in this study as well. Finally the vast majority of relevant literature on the green consumer profile is American (Schlegelmilch, 1994) with European or Asian academic research to be limited. In this context, broadening the study into different geographical locations (European and Asian) can provide valuable insight into profiling the green consumers. Furthermore cultural differences and certain country specific factors such as availability of green product and government regulations could shape different consumption patterns of consumers located in different part of the world (Batt and Giblett, 1999; Solomon and Askegaard, 2004) and thus affecting different values and attitudes of the green consumers.

2.1.1. Values

Values can be defined as beliefs about some desirable end state that transcends specific situations and guides selection of behaviours (Solomon and Askegaard, 2004). Value is one of the physiological factors that have been known to exert major influence on consumer purchasing behaviour. The reasoning is that many products and services are purchased because they are believed to help the individual in attaining a value-related goal. Two such values that highly influence consumer behaviour according to Triandis (1993) are individualism and collectivism. The distinction between individualistic and collectivist societies is crucial to the cross-cultural understanding of consumer behaviour (Maheswaran and Shavitt, 2000). Individualism denotes to the degree, to which people learn to act as individuals rather than as members of the group (Hofstede, 1996) hence they tend to seek fulfilment of their own goal over the group's. People in individualistic societies tend to be more self-centered, self-enhanced and less concerned with the need of the others. They tend to consider the individual self as the basic unit and a source of life identify, purpose and goals (Hofstede, 1996). On the other hand, those in the collectivist cultures value their group membership, respect group processes and decisions, and expect other in-group members to look after or protect them in case of needs or crisis (Hofstede, 1996). For them, keeping good and harmonious relationships inside their in-group is a priority; and avoiding loss of face is important (Aaron and Wong 1995; Wandel and Bugge, 1997). According to Triandis (1993), the dimension of the individualism-collectivism has received most attention in terms of accounting for social behaviour, including environmental behaviour. Past study by McCarty and Shrum (1994) based on profile of the green consumers has shown that collectivist people tend to be friendlier to the environment, while individualistic people tend to be more unfriendly. On the basis of the previous studies, the following hypothesises have been considered.

H1: The more collectivist a person the more likely it is that he will behave in an environmentally friendly way.

H2: The more individualist a person the less likely it is that he will behave in an environmentally friendly way.

2.1.2. Knowledge

Knowledge is recognised in consumer research as a characteristic that influences all phases in the decision process (Laroche *et al.* 2001). McCarthy and Schrum (1994) in an attempt to better understand the environmentally friendly respondent, advocate the importance of determining the green consumers' knowledge towards the environment. Thus the relationship between knowledge and the environmentally friendly respondents is emphasised whereby researchers have asserted that an individual ecological behaviour is highly dependent on his or her knowledge towards the environment (Chan and Yam, 1995). Knowledge towards the environment has been measured by eco-literacy (Laroche *et al.* 2001). Eco-literacy measures the respondent's ability to identify or define a number of ecologically related symbols, concepts and understanding. Earlier studies have shown contradictory findings on consumers' environmental knowledge and their environmentally friendly behaviour. Chan (1999) and Dispoto (1977) have found positive association between environmental knowledge and environmentally friendly behaviour. However, a number of studies (Maloney and Ward: 1973; Schan and Holzer; 1990) have shown that ecological knowledge exerts no significant direction towards ecologically favourable behaviour. Such mixed findings may suggest further research to uncover the relationship between eco-literacy and environmentally friendly behaviour. Considering the above statements following hypothesis has been considered.

H3: The more eco-literate a person is the more likely it is that he will behave in an environmentally friendly way.

2.1.3. Attitudes

The three most studied attitudes in the ecological literature, with respect to environmentally friendly behaviour, are importance, convenience (Laroche *et al.* 2001) and severity of environmental problem (Banerjee and Mckeage, 1994). The predominant variables used to explain environmental responsibility has been environmental concern and severity of environmental problem (Hines *et al.* 1987). The severity of the environmental problem relates to the attitude and beliefts that consumers have towards the environment. According to Banerjee and McKeage (1994), green consumers strongly believe that current environmental conditions are deteriorating and represent serious problems facing the security of the world. Conversely the non-environmentally friendly consumers are more likely to believe that ecological problem will "resolve themselves" (Laroche *et al.* 2001).

Schegelmilch (1994) has defined perceived importance, with respect to the environment, as the degree to which one expresses concern about ecological issues. In other words, importance is simply whether consumers view environmentally compatible behaviours as important to themselves or society as a whole. A Study done by Laroche *et al.* (2001) reveals that environmentally friendly consumers perceive the importance of behaving in an ecologically favourable manner. One explanation for this range of behaviour may be the negative consequences of non-environmentally responsible behaviour that would affect an individual's personal satisfaction. For example, the environmental consequences of using non-recyclable materials are the increased amount of raw materials and garbage generated which in the end will result in unfavourable personal pleasure (Follows and Jobber, 2000). The level of convenience on the other hand refers to how convenient it is perceived for the individual to behave in an ecologically favourable fashion. Measures of perceived inconvenience or personal effort have been included in studies investigating recycling behaviour. An increase in perceived personal effort was found to directly reduce the intent to recycle (Dahab *et al.* 1995) and recycling behaviour (McCarty and Shrum, 1994; Thogersen and Grunert-Beckmann, 1997). Findings from past research have concluded that the level of convenience towards the environment for environmentally friendly respondent is much more positive compared to the non-environmentally friendly respondent (McCarthy and Schrum; 1994; Laroche *et al.* 2001). On the basis of above literature the following hypothesis is expected.

H4: The more strongly a consumer feels about the severity, convenience and importance of environmental issue the more it is likely that he will behave in an environmentally friendly way.

2.1.4. Behaviour

The relationship between behaviour and attitude has been one of the most studied models in profiling the green consumers (Balderjahn, 1988; Follows and Jobber, 2000; Loroche *et al.* 2001; Suchard and Polonski, 1991). Attitude toward the behaviour refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Azjen, 1991). Thus arguing that the more favourable the attitude with respect to the behaviour; the stronger is the individual's intention to perform the behaviour under consideration (Azjen, 1991). Suchard and Polonski (1991) stipulate that behaviour of the ecologically conscious consumers will be reflected in the different ways they try to protect the environment by such effort as recycling, checking that a package is made of recycled material and purchasing only green products. Balderjahn (1988) developed a causal model to predict environmentally responsible purchase behaviour, measured by three indicators which are: buy less packaged products, use returnables, and use fewer detergents. His research reveals that there was no significant relationship between positive attitude towards pollution and purchase behaviour, but was able to find a weak positive relationship between attitude toward ecologically conscious living and behaviour (Follows and Jobber, 2000). A possible explanation for the low correlation between attitude and behaviour is the omission of intentions. According to the Theory of Reasoned Action the performance of a specific behaviour is determined by the intention to perform the behaviour (Azjen and Fishbein, 1980). The role of intentions in the attitude-behaviour relation is dependent upon the level of the effort needed to perform the behaviour (Bagozzi *et al.* 1990) thus the higher the effort, the less likely is the individual to behave in an ecologically favourable behaviour. Past findings hence indicate that having a positive attitude towards the environment does not necessarily result in higher ecologically favourable behaviour, nevertheless a positive but weak relationship does exists (Balderjahn, 1988; Diamontopoulous *et al.* 1994; Suchard and Polonski, 1999). Following the previous study we are in a position to assume that:

H5: The more ecologically favourable behaviour an individual possesses, the more likely it is that he will behave in an environmentally friendly way.

2.2. Environmentally Friendly Products

2.2.1. Environmentally Friendly Clothes

Like all conventional products, green products deliver benefits and costs to their customers. Most conventional marketing theories (Bradley, 1995; Kotler, 1997) assume that the customers try to maximise their benefits and seek to minimise cost. Following this economic approach, green products are brought only if their cost-benefit balance shows better performance in the eyes of the customers than the equivalent balance of conventional products (Meyer, 2001). In terms of cost and benefit of green clothing the most important criteria are appearance, functionality and price (Meyer, 2001). The most important cost for any type of products is price. However, unlike conventional clothing, the costs incurred in green clothing are much higher due to its more complicated production process. The way the material is produced, preference to use natural instead of heavy metal dyes are one such cause that results in the increased production cost hence ending in a higher retail price. Beside the tangible costs, there exist some intangible costs associated with green clothes such as higher search costs (Meyer, 2001) due to the products low availability.

Like conventional clothing, the benefits of green clothes are appearance and functionality that these clothes provide to the consumer. Design of the clothes is an important factor that contributes to the overall appearance of the wearer and a major influence in consumer purchase decision (BBC, 2007). However, according to Meyer (2001), most consumers neither directly nor indirectly perceive environmentally friendly clothes with high design aesthetics. One of the major reasons for this is that most consumers still perceive green clothes as boring, colourless and lack design quality (Joergens, 2006). Furthermore when it comes to organic materials, consumers are sometimes sceptical with the product credibility as, like all green products, the environmental advantages are hidden from customers (Fraj and Martinez, 2006; Meyer, 2001). As a result, Meyer (2001) argued that green products will remain niche phenomena for pure green consumers as long as they only appeal to the consumer's environmental awareness and do not provide other benefits. Therefore it is clear that in order for organic clothes to compete with conventional clothes and appeal to the masses it is crucial that excluding the environmental benefits of these clothes must outweigh the costs. On the basis of above literature we are in a position to expect that:

H6: The more the benefit (design, material) that is associated with organic clothes; the more it is likely that the respondents will purchase the clothes.

H7: The higher the cost (price) associated with organic clothes; the less likely it is that the respondents will purchase the clothes.

2.2.2. Organic Food

Organic food is the product of organic farming. Organic farming as described in the EU entails significant restrictions on the use of fertilisers and pesticides, which may have detrimental effects on the environment or result in the presence of residues in agriculture, produce (Roddy *et al.* 1994). The socio-demographic factor that distinguishes the organic food consumers from the non-organic food consumers according to the past literature lies on their age, sex and income (Skapinkar, 2005). A higher number of women than men hold more positive attitudes towards organic foods and are purchasers of organic foods (Lockie *et al.* 2002; Wandel and Bugge, 1997). This may be partly due to women's greater concern with health and their concern and responsibility for feeding children and family members (Lockie *et al.* 2002). Furthermore the proportion of people consuming organic food has been found to rise with income (Lockie *et at.* 2002; Torjusen *et al.* 2001). As with conventional foods, there exist certain costs and benefits that are linked to organic food. Health, contents and environmental benefits have been found to be important considerations in the choice of organic foods by consumers, whereas price and availability have been found to be the barriers (Lockie *et al.* 2002; Wandel and Bugge 1997).

Health is the most important platform driving the purchase of organic food as health benefits were perceived as an important attribute of organic foods (Mintel, 2008). This belief might correlate to findings of Davis *et al.* (1995) that consumers' perception towards organic foods is that the produce is healthy. Moreover health and the natural content of foods have been found to be pivotal in the food choices of organic consumers (Chinnici *et al.* 2002; Lockie *et al.* 2002; Pearson, 2002). Although consumer belief is that organic food is healthy, organic food is not necessarily always free of pesticide residues (Soil Association, 2008), as it is clarified that residues for organic food exist but are likely to be lower than that of conventionally grown foods (Soil Association, 2008). The highest barrier towards purchasing organic foods is the cost of the foods and the availability of the products (Batt and Giblett, 1999). Mintel (2008) report reveals that the average retail price of organic foods in the UK has increased by 60-70% compared to the ordinary equivalents. Its higher production costs bring about high retail price for organic foods. Crops grown organically are more vulnerable to pests and disease therefore requiring higher maintenance. Additionally it is also more labour intensive and farmers pay more for organic animal feed. Besides price, the availability of organic foods is another restrictive factor in purchasing organic foods. However, the availability of organic food does appear to have increased in the UK. For example more supermarket chains in the UK such as Marks & Spencer and Tesco have carried more organic foods and currently carry its own organic lines (Mintel, 2008). Besides the demographic consumer, when it comes to environmental beliefs, a study by Worsley and Skrzypiec (2005) reveals that personal values related to nature and environment were found to positively predict pro-organic food beliefs. Worsley and Skrzypiec (2005) also argued that more environmentally conscious consumers are seen proven to be the majority of buyers of organic products. Following assumptions can be drawn on the basis of above literature.

H8: The more benefits (health, contents) that are associated with the organic food; the more likely it is that therespondents will purchase the food.

H9: The higher the costs (price) that are associated with the organic food; the less likely it is that the respondents will purchase the food.

H10: The more associated the food is as an organic produce; the more likely it is that the respondents will purchase the food.

3. Methodology

3.1. Research Approach

In this research, method of triangulation will be used in which both the quantitative and the qualitative approaches can be both combined. Data triangulation allows for more than one method to be employed in the development of measures hence resulting in greater confidences in findings (Bryman and Bell, 2003). In addition triangulation allows for the crosschecking of data as well as allowing access to different levels of reality. Thus, the quantitative data analysis used in this research has been supported by the qualitative data. The use of qualitative data according to Bryman and Bell (2003) can provide a deeper understanding of the phenomenon that would be obtained from the quantitative data. By this means, qualitative data will provide a more personal and rich information attained from the respondents relating to their experiences, understanding as well as their motivations (Zappe *et al.* 2006).

3.2. Research Sampling & Methods

The sample of respondents will consist of men and women with a varied age category living in areas where environmentally friendly programmes are placed and advertised as to avoid bias. A total of 40 questionnaires were distributed consisting of 20 South Asian and 20 British. From the total 40 respondents that have answered the questionnaire, a following in depth interview session was conducted. The interview compromised of 6 South Asian (3 Indians, 2 Pakistanis and 1 Bangladeshi) and 6 UK respondents.

Triangulation was employed in the data collection process. Questionnaire and in-depth interviews were carried out through surveys and were used as the main tool in the analysis. A five point Likert Scale from strongly agree to strongly disagree has been used as a research tool for the survey. The questionnaire was will be administered directly and via the Internet to the respondents. A following in depth interview session was carried out in this research. A Standardised Open-Ended interview Approach has been used in this study in order to encourage a full, meaningful answer using the subject's own knowledge and or feelings. The sets of interview questions were designed and divided into the five main categories composing of values, behaviours, attitudes, knowledge and factors of green foods and clothes. To avoid bias all respondents were faced with the same initial type of interview questions.

4. Result and Analysis

4.1. Descriptive Statistical Analysis

A total of 40 respondents were included and 40 questionnaires were collected in this research. From the total 40, twelve respondents were then interviewed for the qualitative analysis.

4.1.1. Sex

The distributions of the respondent's based on sex was fairly equal, with female respondents accounting for 60% of the total respondents. Male respondents on the other hand accounted for the remaining 40%.

Table 4.1 : Sex-wise distribution of the Respondents

Sex	Sample	(%)
Female	24	60
Male	16	40
Sum	40	100

4.1.2. Age

The distribution of the respondents by age shows preponderance in the age group 20-30 years. The 20-25 years age-category accounts for the highest rate of respondent in this research.

Table 4.2 : Age-wise distribution of the Respondents

Age Group (Years)	Sample	(%)
20-25	26	65.0
25-30	7	17.5
30-35	5	12.5
35-50	2	5.0
Sum	40	100.0

4.1.3. Nationality

The distribution of the respondents by nationality was perfectly equal with the British citizens accounting for 50% while South Asian (Indian 8, Pakistani 4, Sri Lankan 4 and Bangladeshi 4) accounting for 50% of the total respondents.

4.1.4. Environmentally friendly and non-environmentally friendly Group

The distribution of the respondents between environmentally friendly, non-environmentally friendly and the undecided respondents was fairly equal. The undecided consumer accounts for 37.5% out of the total respondents followed closely by the non-environmentally friendly respondents at 32.5% and environmentally friendly respondents at 30%

Table 4.3. Respondent Grouping

Type	South Asian*	British@	Total #	(%)
Environmentally Friendly	3 (15.0)	9 (45.0)	12 (30.0)	30.0
Non-environmentally friendly	10 (50.0)	3 (15.0)	13 (32.5)	32.5
Undecided	7 (35.0)	8 (40.0)	15 (37.5)	37.5
Total	20 (100.0)	20 (100.0)	40 (100.0)	100.0

*@# Figures in the parentheses are percentages to the respective column

Our grouping was based on the result from the dependent variables measurement. The measurement for endogenous variables shows that the majority of the British respondents are categorised as the environmentally friendly consumers while the South Asian respondents are categorised overwhelming as the non-environmentally friendly consumers in this research. The result from the endogenous variable measurement showed that out of the 12 respondents, who are categorised as environmentally friendly, 9 were from the UK and 3 were from South Asia. On the other hand, from the 13 respondents classified, as non-environmentally friendly 10 were from South Asia whilst 3 were British. Out of the 15 undecided consumers, 7 were South Asian, while the remaining 8 were from the UK.

4.2. Reliability Assessment (Cronbach's α)

Cronbach's α is the most popular method of examining reliability. The Cronbach's α test ranges from zero (0) for a completely unreliable test to one (1) for a completely reliable test. Statisticians are agreed that 0.90 and above shows excellent reliability, 0.90 to 0.70 shows high reliability, 0.70 to 0.50 shows moderate reliability while 0.50 and below shows low reliability. The empirical result of this analysis shows that our average α for the entire items in the construct is > 0.50 and thus indicating that our questionnaire is acceptable to be used.

Table 4.4 : Reliability Statistics:

Cronbach's Alpha	Cronbach's Alpha based on Standardi sed Items	N of items
.681	.512	14

Table 4.5: Item Statistics

Assessment	Cronbach's Alpha
Values	
Individualism	.642
Collectivism	.737
Attitudes	
Convenience	.552
Severity	.575
Importance	.575
Behaviour	.615
Knowledge	.723
Organic Clothing	
Price	.691
Design	.711
Organic and Ethical	.569
Organic Food	
Price	.676
Content	.705
Health	.742
Organic and Ethical	.628

4.3. Independent T-test

4.3.1. Values

Two types of values were used to measure and distinguish the environmentally friendly consumer from the non-environmentally friendly consumers. These two types of values are individualism and collectivism.

4.3.1.1. Individualism

Individualism denotes the degree to which people act as individuals rather than as members of a group in a society. The research has verified that individualism values for the two groups are significantly different (Table 4.6). It is found that the mean for the environmentally friendly group is higher than that of the non-environmentally friendly group. That is, people who are environmentally friendly, on average, are likely to exert individualism value compared to the non-environmentally group. However this difference may not be significant and to ascertain whether it is significant or is due to chance, the Independent sample T-test must be examined.

Table 4.6: Group Statistics

Type		N	Mean	Std Deviation	Std Error Mean
Individual	Friendly	12	1.6875	.35556	.10264
	Non Friendly	13	1.4038	.41506	.11512

The Levene's Test for Equality of Variance reveals that the significance level is .375 that is, greater than .05 (Table 4.7). Therefore it is assumed that the variances are approximately equal. Finally the result of the Independent T-test shows that there is no significant difference between the mean of the two groups as the significance level stands at .081, which is above the significance level of .05 (Table 4.7). Therefore the null hypothesis cannot be rejected, and we can validate that there is no significant difference between environmentally friendly and non-environmentally friendly group individualism.

Table 4.7 – Independent T-test:

Individual	Levene's Test		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	90% Confidence Interval of the Difference	
								Lower	Upper
Equal Variance assumed	**.819**	**.375**	**1.827**	23	**.081**	.28365	.15522	-.0374	.60475

A past study by Triandis (1993) has tended to favour those people with less individual values as people who possess the profile of the environmentally friendly consumers. He believed that people who were less concerned about themselves would be more concern towards society and hence the environment. However, the result showed that both environmentally friendly and non-friendly respondents placed the same value on individualism and no significant differences exist. The reason for this similarity could be caused by the fact that the majority of environmentally friendly respondents are from the UK and, according to Hofstede (1983). The British are known to have higher individualistic values. Thus, this reason could explain as to why the environmentally friendly respondents place the same individualistic values as the non-environmentally friendly respondents.

Qualitative Analysis: Both types of respondents revealed that they do have the same individualistic values. When asked whether they consider themselves as an individualist both, groups gave positive feedbacks. For the majority of UK respondents who were categorised as environmentally friendly, stated that factors which are seen as individualistic traits such as being independent, having a sense of accomplishment and self fulfilment are all values that they deemed important. According to them, placing great importance on values such as independency and self-reliance are important because Britain is such an individualistic society and thus having such traits is important for the wellbeing and interest. The high level of the British individualistic culture is supported by a study done by Hofstede (1983) where he has identified the pervasive fundamental differences of national culture and ranked the UK as a unique country that has the highest ratings on individualism value.

However, this result was suspect, on cultural differences, in identifying the green consumer as this result was not in consonance with the results of the study by Triandis (1993) which had concluded that environmentally friendly consumer are expected to have lower individualistic values. Likewise, when the non-environmentally friendly respondents who were in the majority in South Asia were asked whether they considered themselves to be an individualist, responded largely differently to the British. Many of the respondents said that they had adapted some part of their lifestyle into the mainstream individualistic Western culture. As most of the South Asian interviewed are those who are open and familiar with the western culture and with some having lived in the UK for more than 2 year, this might explain why their values have shifted towards individualism. A study carried out by Fan and Karnilowicz (1997) revealed that among Chinese migrants in Australia, and who had been in Australia for a long period of time have adopted Australian values and beliefs as a result of acculturation. The previous study is supported by this result whereby most of the South Asian respondents stated that overtime they have become more of an individualistic type of person although they believe that their individualistic values are less than those of the Westerners.

4.3.1.2. Collectivism

Collectivism denotes the degree with which people act as members, rather than as individuals, in society. Research has verified that the collectivism value; either for people who are categorised as environmentally friendly or not, have showed the mean to be significantly different (Table 4.8). It is found that the mean for the non-environmentally friendly consumer group is higher than that of the environmentally friendly group. However, this difference may not be significant and to ascertain whether it is significant or is due to chance, the Independent sample T-test must be examined.

Table 4.8 – Group Statistics:

Type		N	Mean	Std Deviation	Std Error Mean
Individual	Friendly	12	1.3892	.39853	.11505
	Non Friendly	13	1.6923	.58471	.16217

The Levene's Test for Equality of Variance reveals that the significance level is .406, that is greater than .05 (table 4.9). Therefore, it can be assumed that the variances are approximately equal. Finally the result of the Independent T-test shows that there is no significant difference between the means of two groups as the significance level stands at .147, which is above the significance level of 0.05 (Table 4.9). This implies that the null hypothesis cannot be rejected, as there are no significant differences between the environmentally friendly groups and the non-environmentally friendly group in terms of their collectivism. The research of Triandis (1993) and McCarty and Shrum (1994) suggest that collectivist people tend to be friendlier to the environment. However this research found that collectivism value was not a good predictor of the green consumers' profile. In fact, results from the t-tests indicated that the average collectivism score was exactly the same for both segments of the consumers.

Table 4.9 – Independent T-test:

Collectivism	Levene's Test		T-test for Equality of Means					90% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	Lower	Upper
Equal Variance assumed	.716	**.406**	1.502	23	**.147**	-.30314	.20189	-.72078	.11450

Qualitative Analysis: Interviews have revealed that both the types of respondents place the same level of collectivism values. As to how the South Asians view their relationship with others, most researchers point to their unique collectivist nature (Chan, 1999; Schwartz, 1990). Hofstede (1996) asserts that Asians emphasise the primacy of the interest of the specific social group (e.g. family) and the maintenance of group cohesiveness. This finding was in line with the interviews conducted with the South Asians. Although the overwhelming majority of the South Asian was not environmentally friendly, they showed high collectivism value. The South Asians care highly about their relationship with others such as the family members, friends and the society. Furthermore, the South Asian respondents have a strong propensity to conform to the norm of their social groups, and they are highly concerned whether their behaviour would make them look unpleasant within such group. The majority of respondents stated that they do care about the way they look and they are highly aware that their friends, especially the ones belonging in the same group as they, are looking at their appearance. Image, according to them is highly important, as many of the respondents believe that the right portrayal of their image will send out a positive message to others about themselves. The environmentally friendly consumers, which overwhelmingly consist of the British people also, have high collectivist values. Majority of the respondents from this group have stated that they do care about their relationship with others. The British people also consider themselves as social beings. According to them having a loving relationship with their family and friends is just as important to them as having a successful career. The difference between the South Asians and the British is that the latter do not place that high an importance on their image. It is true that they have to portray a good image in certain occasions such as at work but they do not feel that they have to conform to the societal norms. Most of the respondents do not really care as to whether other people judge them on the basis of way they look and dress. Another similar answer from the interviews was that both South Asian and British people seem concerned about the welfare of others. So it is verified in this research that collectivism is not a good predictor in profiling the green consumer, as the collectivism score was exactly the same for both groups.

4.3.2. Attitudes

The three most studied attitudes in the ecological literature, with respect to environmentally friendly behaviour which are: importance, convenience and severity of environmental problem.

4.3.2.1. Severity of Environmental Problems

The severity of environmental problem can be defined as attitude and beliefs that consumers have towards the environment. Result from the group statistics has verified the attitudes towards the severity of environmental problems, either for people who are categorised as environmentally friendly or non-environmentally friendly, have shown significant differences (Table 4.10). It is found that the mean for the environmentally friendly consumer group is higher than that of the non-environmentally friendly group.

Table 4.10: Group Statistics

Type		N	Mean	Std Deviation	Std Error Mean
Severity	Friendly	12	4.4375	.60420	.17442
	Non Friendly	13	3.0000	.57735	.16013

The Levene's Test for Equality of Variance suggests that the significance level is .373 that is greater then .05 (Table 4.11). Therefore it can be assumed that the variances are approximately equal. Finally the result of the Independent T-test shows that there is a significant difference between the two groups as the significance level stands at .00, which is below the significance level of .05 (Table 4.11). Therefore the null hypothesis can be rejected and confirm that there is a significant difference between environmentally friendly and non-environmentally friendly group's attitude. People who are environmentally friendly place higher concern over the severity of environmental problem compared to the non-environmentally friendly group.

This finding is supported by a previous study done by Banerjee and Mckeage (1994), where according to them, green consumers strongly believe that current environmental conditions are deteriorating and represent serious problem facing the security of the world. Conversely, consumers who are not environmentally friendly tends to believe that problem within the environment is likely to be resolved by itself.

Table 4.11: Independent T-test

	Levene's Test		T-test for Equality of Means						
								90% Confidence Interval of the Difference	
Severity	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	Lower	Upper
Equal Variance assumed	.424	**.373**	6.083	23	**.000**	1.4375	.23633	.94862	1.92663

<u>Qualitative Analysis:</u> Interviews revealed that people who were grouped in the environmentally friendly category were mostly British people and they were very much concerned about the state of the current environment. Global warming seems to be the most pressing issue for them as the impact, according to them, is highly related to the current British weather which as one respondent remarked is 'very unpredictable'. The few of the South Asians, who were categorised as environmentally friendly, came from the high level of pollution especially in the capital cities of South Asia. Most of the capital and commercial cities in South Asia do not have strict rules to protect the environment from pollution. But such rules exist in the UK. Meanwhile most of the South Asians who were largely categorised in the non-environmentally friendly group believe that there is no sudden concern for the environment. Although they believe that the

environmental issue does exist for them, it is not very pressing, as they do not face the problem of the state of the environment directly.

4.3.2.2. Convenience of being environmentally friendly

The level of convenience refers to how convenient it is perceived for the individual to behave in an ecologically favourable fashion. This research findings show that convenience of being environmentally friendly for either respondent has shown significant differences (Table 4.12). It is seen that the mean for the environmentally friendly consumer group is higher than that of the non-environmentally friendly group.

Table 4.12: Group Statistics

Type		N	Mean	Std Deviation	Std Error Mean
Convenience	Friendly	12	3.8892	.98798	.28520
	Non Friendly	13	1.8977	.64461	.17878

The Levene's Test for Equality of Variance reveals that the significance level is .07 that is greater than .05 (Table 4.13). Therefore it can be assume that the variances are approximately equal. Finally the result of the Independent T-test shows that there is a significant difference between the two groups as the significance level stands at .000, which is below the significance level of 0.05. (Table 4.13). p'['[p;)Therefore, we can reject the null hypothesis and statistically confirm that there exists significant difference between environmentally friendly and non-environmentally friendly group on the level of convenience towards the environment. People who are environmentally friendly have a more convenient attitude towards the environment compared to those who are non-environmentally friendly.

Past research concerning people's attitudes and environmentally friendly behaviour has also supported this result. Mcarthy and Schrum (1994) and Laroche *et al* (2001) studied the impact of the importance and convenience of recycling on behaviour and found that the more the individuals believed that recycling was inconvenient the less likely were they to recycle.

Table 4.13 – Independent Sample T-test:

	Levene's Test		T-test for Equality of Means						
								90% Confidence Interval of the Difference	
Convenience	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	Lower	Upper
Equal Variance assumed	3.595	**.071**	6.017	23	**.000**	1.99147	.33099	1.3067	2.67618

Qualitative Analysis: The level of convenience of being environmentally friendly for the two types of respondents differs significantly. Those respondents who were environmentally friendly stated that they do not feel it inconvenient to separate piles of garbage for recycling. One respondent stated that she would rather bring her own cup of drink rather than use the plastic one that school provides for her. Making a further effort to be green for this type of a consumer is just normal according to one respondent. Other respondents revealed that living in the UK, in a way has made it easier, accessible and more convenient to be green as, according to her, places such as her school have provided separate trashcans for different types of waste. This, in the end, has made her ecological effort according to her more convenient. Most of the responses were comparatively similar to those of environmentally friendly respondents. However, this was not the case for the non-environmentally friendly respondents who declared that being environmentally friendly is such a hassle. The availability of environmental products is one such cause. One respondent said that although buying a non-organic product was harmful to the environment she still bought them anyway because it was more convenient. Although many organic stores have cropped up in the last couple of years, accessibility, according to one respondent was still an issue. Therefore she would rather buy from a place closest to where she lived even though the product was not environmentally friendly. However, most of the respondents who were grouped as non-environmentally friendly stated that they believed buying environmental products or recycling would help the environment. However they found, it 'just inconvenient' to do so.

4.3.2.3. Importance of being environmentally friendly

The importance of being environmentally friendly is seen as the degree to which one expresses concern about ecological issues. The research has examined as to whether there was a significant difference in means either for environmentally friendly respondents or not, (Table 4.14). We can see that the mean for the environmentally friendly consumer group is higher than that of the non-environmentally friendly group.

Table 4.14. Group Statistics

Type		N	Mean	Std Deviation	Std Error Mean
Importance	Friendly	12	3.0250	.27010	.07797
	Non Friendly	13	1.4077	.41726	.11573

The significance level is .400 that is greater than .05 (Table 4.15). Therefore we can assume that the variances are approximately equal. Finally the result of the Independent T-test shows that there is a significant difference between the two groups as the significance level stands at .000, which is below our significance level of 0.05 (Table 4.15). Therefore we can reject the null hypothesis and conclude that there is a significant difference of attitudes between the environmentally friendly group and the non-environmentally friendly groups.

Table 4.15: Group Statistics

	Levene's Test		T-test for Equality of Means						
								90% Confidence Interval of the Difference	
Importance	**F**	**Sig.**	**t**	**df**	**Sig. (2 tailed)**	**Mean Difference**	**Std. Error difference**	**Lower**	**Upper**
Equal Variance assumed	4.734	**.400**	11.394	23	**.000**	1.61731	.14195	.132367	1.91095

The level of perceived importance of the green consumer has been one of the most studied attitudes in ecological literature. Past study has revealed that perceived importance is one of the factors that highly differentiate the two segments of the consumers (Laroche *et al.* 2001). Theses consumers who are environmentally friendly mainly find it important to behave in an ecologically favourable way.

Qualitative Analysis: Respondents in this research have different views on the importance of environmentally compatible behaviour.

Those who favour importance as a defining factor in determining the profile of a green customer stated that it was imperative for individuals to understand the importance of becoming green. Respondents have also noted that believing in the cause on going green not only benefit the sole individual but also the benefits the society as a whole. When the respondents were asked if they believed that recycling was important and that it would save natural resources, the response of most of the environmentally friendly respondents was overwhelmingly positive. Such respondents felt that it was incumbent and important on their part to behave in a favourable ecological manner particularly in the backdrop of the current degraded environmental conditions. They believe that certain actions that they take such as recycling go to some extent to alleviate environmental problems. Many of the environmentally friendly respondents, mainly British, believe that their environmentally friendly actions can make a difference. One of the respondents noted that is since the importance of the environment does not appear to be much of a concern to the government and the business, it becomes the responsibility of people like her to find it necessary to behave green and if they do not, who will?

For the majority of the South Asian respondents who are categorised as non-environmentally friendly the opposite holds true. They do not believe in the importance of behaving in a favourable ecological way. The reason for this attitude is because they feel that the environmental problem is too large and the preservation of the environment is the responsibility of the government and large companies. Another concern raised by most of these respondents was that of priority. One respondent stated that the importance of being green was not her priority at the moment as there were other matters that she found more important. This type of response was overwhelmingly the majority answer for the non-environmentally friendly consumers mainly hailing from the South Asia. Countries in South Asian are still faced with myriad problems, and therefore the society places greater importance on more basic needs than ecological needs (Roberts; 1996, Solomon and Askegaard, 2004). Furthermore, unlike the British those consumers in the South Asia who do care for the environment do not have a proper outlet to raise their voices. Hence, as one respondent stated, any action that they take would have little impact on the environment anyway as the governments there usually are slow to react. Thus our finding reveals that the importance of environmentally compatible behaviour is a good predictor in profiling and separating the green consumers from the non-green consumers.

4.3.3. Knowledge (Eco-literacy)

Knowledge measures the respondents know how towards environmental issues and conditions. The research has verified that knowledge on the environment for both respondents, showed significant differences (Table 4.16). We can see that the mean for the non-environmentally friendly respondents is higher than that of the environmentally friendly respondents.

Table 4.16 – Group Statistics:

Type		N	Mean	Std Deviation	Std Error Mean
Knowledge:	Friendly	12	1.3333	.49237	.14213
	Not Friendly	13	1.3846	.50637	.14044

The Levene's Test for Equality of Variance tells us that the significance level is .614 that is greater than .05 thus indicating that the variances are approximately equal. The result of the Independent T-test shows that there is no significant difference between the two groups as the significance level stands at .800, which is above the significance level of 0.05. (Table 4.17). Therefore we cannot reject the null hypothesis and confirm that there is no significant difference between environmentally friendly and non-environmentally friendly groups' knowledge on environment. This means that both the groups hold the same knowledge about the environment and no significant differences exist.

Table 4.17: Independent Sample T-test

Knowledge	Levene's Test		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	90% Confidence Interval of the Difference	
								Lower	Upper
Equal Vari ance assumed	.261	**.614**	.256	23	**.800**	-.05128	.20005	.46511	.36255

Past research has shown contradictory findings on the relationship between knowledge and behaviour. For example, eco-literacy is recognised as one main characteristic that influences ecologically favourable behaviour (Alba and Hutchinson, 1987). Here the findings however are largely supported by previous research conducted by Maloney and Ward (1973), which show that the correlation between consumer's ecological knowledge and ecologically favourable behaviour does not exist.

Qualitative Analysis: Both groups of respondents were able to present a sound and accurate feedback relating to their knowledge towards the environment with many respondents capable of naming more than one type of ecological issue. The most common environmental issues that the respondents named in descending order are global warming, pollution, deforestation and the landfill issue. When asked what type of actions resulted into these issues both the groups were able to provide detailed answer and gave a large number of examples. Most of the respondents who stated global warming as an issue, believed that the root of the problem was cause by the large quantity of carbon dioxide release in the air from cars, aviation and power plants. Meanwhile the waste and the landfill issues according to the respondents, was caused by throwing away non-recyclable waste, and also by the low efforts by humans to recycle. Most of the respondents were able to identify the green recycling symbol as well as the Fair-trade symbol and what they meant. Moreover, they were able to explain what these symbols were associated with. One of the respondent answered that sweatshops, which are closely associated with the Fair-trade symbol, were places where people (most likely women and under age children) work under very harsh conditions under unfair wages. Both types of respondents were able to name stores that carry organic food such as Marks & Spencer and Whole Foods. However, most of the respondents were able to name environmentally friendly clothing brands or stores such as Stella McCartney, People Tree and Oxfam as places where they can acquire green and ethical clothing. When asked as to where their knowledge about the environment came from the stated that feature movies, television documentaries, celebrity, magazines and friends as a source of their information. However, most of the respondents replied that the media and celebrity are their biggest source of environmental knowledge.

4.3.4. Behaviours

Behaviour measures concrete actions that individuals take to be green. With respect to behaviour, the research has verified that both types of respondents have shown significant difference in t-value (table 4.18). It is found that the mean for the environmentally friendly consumer group is higher than that of the non-environmentally friendly group.

Table 4.18 – Group Statistics:

Type		N	Mean	Std Deviation	Std Error Mean
Behaviour:	Friendly	12	3.3333	.66864	.19302
	Non Friendly	13	2.6408	.39794	.11037

The Levene's Test for Equality of Variance suggests that the significance level is .132 that is greater than .05 (Table 4.19). Therefore we can assume that the variances are approximately equal. Finally the result of the Independent T-test shows that our T value is 3.177 with 23 degrees of freedom. There is a significant difference between the two groups as the significance level stands at 0.004, which is below our significance level of 0.05 (Table 4.19). Therefore we can reject the null hypothesis and confirm that there is significant difference between environmentally friendly and non-environmentally friendly groups behaviour. People who are environmentally friendly possess a more favourable behaviour towards the environment than those who are non-environmentally friendly.

Table 4.19. Independent Sample T-test

Behaviour	Levene's Test		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2 tailed)	Mean Difference	Std. Error difference	90% Confidence Interval of the Difference: Lower	Upper
Equal Variance assumed	2.446	**.132**	3.177	23	**.004**	0.69256	0.21796	0.24168	1.14345

Suchard and Polonski (1991) stipulated that the ecologically conscious consumers try to protect the environment in ways such as recycling, checking that a package is made of recycled material and purchasing only green products. Those previous findings are in line with this research result whereby the behaviour of the environmentally friendly respondents is statistically more favourable to the environment.

Qualitative Analysis: Behaviours among the two sets of consumers differ significantly towards the environment. Environmentally friendly respondents are continuously making sure that he/she has carried out some actions that are ecologically favourable. Their behaviours are mirrored in actions such as recycling, buying green products and consuming less environmentally harmful products, as a solution that they believe would improve the environment. One respondent stated that she always tried to buy less environmentally harmful products and usually carried a shopping bag when doing grocery shopping as opposed to using the plastic bags provided by could protect the environment but she is certain that her action does have an impact on the environment. On the other hand, non-environmentally friendly respondents have just done the opposite. This type of respondents mostly revealed to a large extent that no environmental notion is justified when taking any sort of actions. One respondent stated that he just throws waste in any available trashcans, and does not really care whether his actions have any impact on the environment. Such behaviour is one factor that distinguishes these respondents apart. Environmentally friendly respondents justify their behaviour through clear-cut action while non-environmentally respondents do just the opposite.

4.3.5. Environmental Clothing

Table 4.20 shows that the mean for both the types of respondents is different for all variable that represent organic clothing. However this difference may not be significant and to ascertain whether it is significant or is due to chance, the Independent sample T-test must be examined.

Table 4.20: Group Statistics

Type	Mean	Std Dev	Std Error
Price			
Friendly	1.7500	.45227	.13056
Not Friendly	1.7692	.43853	.12163
Design			
Friendly	1.2500	.45227	.13056
Not Friendly	1.7692	.43853	.12163
Organic			
Friendly	3.4750	.34145	.09857
Not Friendly	0.1746	.56068	.15555

The Levene's Test for Equality of Variance reveals that the Significance level is greater than 0.05. Therefore we can assume that all the variances are approximately equal. Finally the result of the Independent T-test shows that there is a significant difference on all the variables between the two groups as the significance level for price stands at 0.008 followed by design at .008 and organic material at .000 which is all below our significance level of 0.05 (Table 4.21). Therefore we can reject the null hypothesis and can confirm that there is a significant difference in attitudes between environmentally friendly groups and non-environmentally friendly groups towards organic clothing.

Table 4.21: Independent Sample T-test

Type	F	Sig	t	df	Sig (2 tailed)
Price	0.046	**0.831**	2.914	23	**.008**
Design	0.046	**0.831**	-2.914	23	**.008**
Organic	0.379	**0.544**	9.219	23	**.000**

Qualitative analysis: Price is the number one factor that highly differentiates the environmentally friendly consumer and the non-environmentally friendly consumers on their clothing purchase. Design and materials were the major factors that differentiate the two types of groups. The environmentally friendly consumer supports this green clothing concept. However interview findings have revealed that although they support this concept they have bought very little, (and some never purchased) environmentally friendly clothing before due to high prices and lack of availability and credibility. Respondents revealed that they supported green clothing, but they have also stated that price plays a major role in their purchase decision for clothes. This answer is related to the majority of sample respondents who were mostly students, therefore, having a lower disposable income. However, it is very important to note that the environmentally friendly respondents have also stated that they were willing to pay is related to the green clothing is availability. Most of the respondents who have never bought green clothing were interested in purchasing them but the lack of accessibility for these clothing acted as a hindrance. Credibility is also one factor that they found to be a problem. Although the majority of environmentally friendly respondents would buy these types of clothes they were sceptical about the reliability of the products. When it comes to clothing, these respondents could not differentiate whether the material is really organic or not.

Price is the number one factor that greatly influences the non-environmentally friendly respondents for purchasing clothes. Apart from price design, materials and production produce also constitute considering factors for them too. For these respondents, ethical issue takes a backseat on their purchasing decisions. The clothes that they buy should reflect their personal tastes and not environmental concerns. These respondents would opt to buy those clothes that were less expensive and not produced ecologically rather than the opposite. Respondents were aware of the ethical issue in the fashion industry. However when they shop, these issues were the least of their worries. Environmental issues caused by clothing production are even less of an interest. When asked whether they know that stores such as Top shop and H&M were going green, some respondents were positively surprised. They have always assumed that ethical and green fashion would be boring and unfashionable. The majority of the non-environmentally friendly respondents, reveals that when they buy clothes they buy the image of the product and not because it was produced according to environmentally friendly methods or not.

4.3.6. Organic Food

Table 4.22 shows that the mean for both types of respondents is different for the construct of organic food. However, this difference may not be significant and to ascertain whether it is significant or is due to chance, the Independent sample T-test must be examined.

Table 4.22: Group Statistic

Type	Mean	Std Dev	Std Error
Price			
Friendly	1.5833	.51493	.14865
Not Friendly	1.3077	.48038	.13323
Content			
Friendly	2.0833	.79296	.22891
Not Friendly	2.2308	.59914	.13323
Health			
Friendly	2.2500	.86603	.25000
Not Friendly	2.4615	.77625	.21529
Organic			
Friendly	2.0000	.56408	.16283
Not Friendly	1.4231	.49355	.13689

The Levene's Test for Equality of Variance reveals that the Significance level is greater than 0.05. Therefore we can assume that all the variances are approximately equal. Finally the result of the Independent T-test shows there is no significant difference on variable such as health, content and price. The significance level for price stands at .179 followed by contents at .603 and health at .526, which are all above our significance level of .05 (Table 4.23). Therefore, for those variables we cannot reject the null hypothesis and can confirm that there is no significant difference between both the group's attitude towards health, price and contents of food. However, statistics show significant difference on the variable organic whereby the significance level stands at .01, which is below our significance level of .05. Therefore for this variable we can reject the null hypothesis and verify that there exists difference for both types of groups on the likelihood of purchasing organic food products.

Table 4.23: Independent T-test

Type	F	Sig	t	df	Sig (2 tailed)
Price	1.056	**0.315**	1.385	23	**0.179**
Contents	0.711	**0.408**	-0.527	23	**0.603**
Health	0.362	**0.553**	-0.644	23	**0.526**
Organic	0.042	**0.84**	2.727	23	**0.012**

Qualitative analysis: Findings reveal that both the types of respondents are more open and willing to buy organic foods compared to organic clothing. The most important factors that influence consumer food purchasing decisions are contents of food and health followed closely by price. Both types of respondents answered that the content of the food is one major factor that influences their food purchasing decisions. The content of the food relates to whether it is more nutritious and has more vitamins which the respondents feel would directly affect their health. Unlike organic clothing, non-environmentally friendly respondents are willing to purchase more organic food. The reasoning was that respondents were more concerned about their health and felt that their food intake would directly affect their health. Moreover, most non-environmentally friendly respondent believed organic foods to be healthier compared to normal foods. This confirms the finding of earlier studies that the most frequent motives for buying organic foods is the consumers' perception that the organic foods are healthier (Davies *et al.* 1995). Consequently previous study has shown that the main factor that reverse consumer favourable attitude towards organic product is price (Davies *et-al* 1995).

Again when asked whether respondents were willing to pay 10% higher on organic foods compared to normal foods, both types of respondents stated that they would. However, the non-environmentally friendly consumers were only willing to buy certain organic produce and combine it with normal produce. The answer was supported by our statistically significant findings where the non-environmentally friendly respondents would buy less organic food than the environmentally friendly consumer. This implies that although non-environmentally friendly respondents are willing to pay more for organic foods but the types of foods that they are willing to buy are very limited and less diverse than the environmentally friendly consumer's. If this is the case then we can conclude that the non-environmentally friendly respondents are more selective when purchasing organic food products.

5. Conclusion

The aim of this research was to simultaneously find differences and similarities between the green and non-green consumers as well as examining whether diverse cultural backgrounds provide any significant differences in separating both of these respondents. The findings from this research demonstrate enough evidence to separate these two respondents based on environmental and cultural backgrounds.

1. 'Values' was one factor that failed to differentiate the environmentally friendly respondents from the non-environmentally friendly ones. The research initially presupposed that values would differ between these two types of respondents. However, this hypothesis was not accepted as the score for individualistic values and collectivism value showed no significant differences. This finding indicates show that we can reject the notion that environmentally friendly consumers have higher collectivism values and lower individualistic values than those of the non-environmentally friendly consumers. Among the many reasons that would explain the similarities in values is the process of acculturation. Qualitative findings reveal that both the British and the South Asian respondents have shifted their presupposed cultural values and as a result are neither high on individualistic or collectivism values.
2. A very important result from the quantitative and qualitative data indicates that attitudes are very good predictors of the environmentally friendly consumer. This is consistent with many previous studies (Chan, 1999; Laroche *et al.* 2001; Webster, 1975) in which attitudes were found to be good predictors of ecologically friendly behaviour. All of the t-tests have revealed that all three attitudes (importance, convenience and severity of environment) differentiate the two segments in statistically significant ways. Therefore we can accept the validation that attitude is a good indicator in separating the environmentally friendly consumers from the non-environmentally friendly consumers.
3. Knowledge about the environment was not a good predictor in profiling the green consumers as both respondents had similar knowledge about the current state of the environment. Besides having higher knowledge, both types of respondents were able to elaborate the many reasons for the current environmental degradation. This result confirms the conclusion proposed by Maloney and Ward

(1973) and again states that environmental knowledge alone cannot be identified as a factor that distinguishes between the green customers and the non-green customers.

4. As shown by the results, the respondent's behaviour differs significantly towards the environment. Those categorised as environmentally friendly take clear and direct action in protecting the environment in different ways. However, those who were not friendly have just done the opposite. Similar to other studies (Suchard and Polonski, 1991) the outcome of this research revealed that the behaviour is a factor that determines and distinguishes these two types of respondents from one another.

5. It is evident from the present quantitative and qualitative analysis that the behaviour towards green clothing differs between the two types of respondents. Environmentally friendly respondent showed a higher willingness to purchase ethical clothing despite higher price and limited design availability. Non-environmentally friendly respondents on the other hand are reluctant to buy ethical clothing on the basis of price, credibility and lackluster design. The different attitudes towards ethical clothing could be attributed to the qualitative findings. These findings show that the respondents' involvement process towards purchasing environmentally friendly clothing is a much more complicated process compared to buying organic food products.

6. The attitude towards organic food for either of the groups was comparatively more positive compared to green clothing. It seems that for both of these respondents, organic food products hold more importance than clothes mainly because foods directly affect health. Therefore both respondents' attitudes towards organic food's price, contents and health factor show no significant differences. The underlying difference was that, unlike the environmentally friendly respondents who seek out to buy as many varieties of organic foods as possible, non-environmentally friendly respondents are more selective in the types of organic products that they consume.

6. Recommendation

The result obtained from this study allows us to state that the environmentally friendly groups of consumers are characterised by their attitudes and behaviours. Knowledge and values on the other hand were poor factors in characterising the environmentally friendly respondents. As attitudes provide significant profile of the green consumers; marketers could advertise the convenience of purchasing environmentally friendly goods. More companies are educating their consumers about the convenience of buying ecologically safe products. The Body Shop for example produces and promotes its product lines with environmental and social sensitivity as a major theme (Laroche *et al.* 2001). Importance of being environmentally friendly was another attitude that has significant differences on both types of respondents. Thus one way for marketers to persuade more consumers into going green is by communicating to the audience on the important and significant impact of this consumption will have on the wellbeing of the environment. Likewise marketers should also communicate to their target audience the severity of environmental problems and in what ways has the company tied to prevent any further degradation of the environment.

For companies that produce environmentally friendly clothes, it is advisable that their products are 'fashion forward' with acceptable designs. The propensity for consumer to purchase clothes that are well designed and green is higher than the propensity to purchase this type of clothing on the basis of green alone (Solomon and Askegaard, 2004). For organic food companies and producers, it is advisable for more of their produce to be available at neighbourhood grocery stores. The higher level of availability would make it easier for consumers to purchase these products regardless to where they live. It is further recommended that marketers should try to formulate realistic marketing strategies so that they can capture the segments that would have the potential to spend more on environmentally friendly products and thereby become market leaders in their respective fields.

7. Limitations of the Study

It has to be acknowledged that there are some limitations to bear in mind when interpreting the results of this study. Firstly, the author has conducted this research in the UK during his short visit there for 3 months only. Due to time constraints the sample size for the respondents in qualitative and quantitative data analysis was small and thus could not represent the overall picture of green consumers. Secondly, many of the South Asian respondents in this research are familiar and open to the British culture, thus there are possibilities of giving biased responses. Thirdly, the choice of factors in the conceptual framework included in this study may not be exhaustive enough and additional variables could be added to get more realistic results. It is therefore, necessary to conduct research on a larger scale in the future on this topic.

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Emotional Intelligence – An Effective Intervention for Enhancing Employee Well-Being

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Abstract
In our day to day life, we express, experience, and interpret a variety of emotions. Every individual differs in his/her ability to express and understand emotions. This ability is called Emotional Intelligence (EI). This study aims to bring out the empirical relationship between Emotional Intelligence and well-being among the employees of the Information Technology and Information Technology Enabled Services sector of South India. The sample consisted of 158 employees of the sector. The findings confirmed that Emotional Intelligence is a significant predictor of well-being. The study also brings out the multifaceted benefits that are to be gained by organizations, if they focus on Emotional Intelligence training. A few techniques to improve emotional regulation skills are also outlined.

Keywords: Emotional Intelligence, Enhancing, IT/ITES Employees, India, Well-Being

1. Introduction

Emotional Intelligence (EI), the term conceived by Salovey and Mayer (1990) and popularized by Goleman (1996) has become a key issue in the discussions pertaining to individual and organizational performance and job satisfaction (Collins, 2000). It is a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action (Salovey and Mayer, 1990). Today's workplace is dynamic in nature and is characterized by time deadlines, cross-cultural teams, work pressures, and work-family conflicts, which in turn result in a highly stressed work force. These factors have a negative impact on the WB of employees and the effectiveness of an organization (Krishnaveni and Deepa, 2008). It is in this context that this paper presents EI as a viable organizational development intervention, which can help the work force overcome its challenges and gain competitive advantage, resulting in a state of positive well-being (WB). It makes an attempt to bring out the significant relation between EI and WB and discusses the collective benefits that can be gained by enhancing the EI levels of individuals.

2. Theoretical framework

2.1. Emotional Intelligence

In ancient Greece, emotions were perceived as unreliable and were controlled abruptly. In this millennium, social science experts argue that emotions of all sorts contribute potentially to cognition. This tremendous change in the way emotions are looked upon forms the basis for the evolution of EI (Krishnaveni and Deepa, 2010). The idea of EI grew out of the concept of social intelligence. The seeds of EI were sown in1920, when Edward Thorndike started working on social intelligence. In 1943, David Wechsler argued that our intelligence model would not be complete unless we incorporate the non-intellective factors into that model. Thus, the attention of researchers was drawn towards this aspect and Howard Gardner talked about multiple intelligences (1983), which comprised of intrapersonal and interpersonal intelligences. This broadening of the concept of intelligence, inspired the way EI was conceptualized and Mayor and Salovey developed the first model of EI (1990) in the field of psychology.

The efforts to conceptualize EI can be broadly classified into two approaches. One approach views EI as a traditional intelligence (Mayer and Salovey, 1999) made up of a set of specific interrelated abilities, that pertain to processing of emotion-related information and is called ability-based approach. Another approach posits that EI constitutes a set of self-perceived abilities, skills, and personality related traits like conscientiousness, Assertiveness, Motivation, Optimism etc and is called mixed-approach (Bar-On, 1997; Dulewicz and Higgs, 1999; Goleman, 1996).

EI is said to have a strong impact on all walks of human life namely at home, at school, and at work. Research has shown that we take our EI lessons in our cradle days (Goleman, 1996). The impact of EI has been proved in all walks of our life. However, most of the research efforts have been directed towards the organizational context. It has been empirically proven that EI impacts individual well-being (Lenaghan *et al.* 2007), stress tolerance (Chapman and Clarke, 2003), leadership qualities (Rosete and Ciarrochi, 2005), organizational commitment (Ioannis and Ioannis, 2002), performance (Shaffer *et al.* 2005), work-family balance (Lenaghan *et al.* 2007), team cohesiveness (Rapisarda, 2002), cultural adjustments (Gabel *et al.* 2005), change management (Chrusciel, 2006), Organizational Citizenship Behavior (Carson *et al.* 2005), Entrepreneurial Qualities (Cross and Travaglione, 2003), Conflict Management (Rahim, 2002), and organizational learning (Singh, 2003).

2.2. Well being

More than 50 years ago the World Health Organization (WHO) defined health as more than freedom from illness, disease, and debilitating conditions. The suggestion by the World Health Organization that health has a positive component led to the use of the term wellness. (Corbin and Pangrazi, 2001).

WB has been defined in many ways by researchers thus far. It is a mind set, a predisposition to adopt a series of key principles in varied life areas that lead to high levels of life satisfaction. (Ardell, 2002). It is a multidimensional state of describing the existence of positive health in an individual as exemplified by quality of life and a sense of well-being. (Bouchard *et al.* 1990). Hettler (1979) defined six dimensions of WB: social, occupational, spiritual, physical, intellectual, and emotional. It is defined as the state of being or doing well in life; happy, healthy, or prosperous condition; moral or physical welfare (of a person or community) - (Oxford English Dictionary, 2007). It encompasses six health related quality domains namely anxiety, depressed mood, positive well-being, self-control, general health and vitality (Grossi *et al.* 2006)

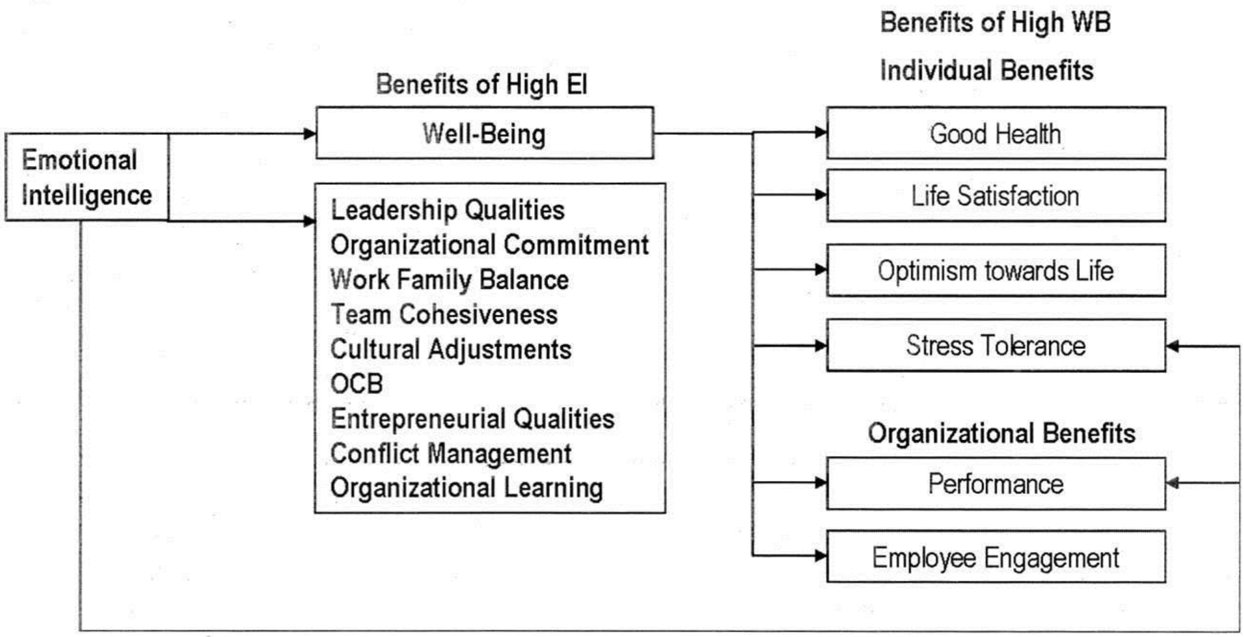
The correlates of WB are classified into six broad groups namely (i) personality factors; (ii) contextual and situational factors; (iii) demographic factors; (iv) institutional factors; (v) environmental factors; and (vi) economic factors (Hoorn, 2007). The various sub factors within the above mentioned broad groups, that influence WB are neuroticism and extraversion (Hayes and Joseph, 2003); blood pressure and brain activity (Blanchflower and Oswald, 2007); health, marital status, age, and gender (Hoorn, 2007); work environment (Towers Perrin, 2000a); forms of democracy (Frey and Stutzer, 2000); political and private freedom (Veenhoven, 2000); climate changes and global warming (Rehdanz and Maddison, 2005); and unemployment and inflation (Becchetti *et al.* 2006; Clark and Oswald, 1994; Di Tella *et al.* 2001; Winkellmann and Winkellmann, 1998). Women report higher WB scores than men and WB is U-shaped with age (WB scores are higher at young age, decline in middle age and increases again at higher ages) (Hoorn, 2007)

WB yields benefits to both the employer and the employee. For the employee, it results in overall good health, a feeling of satisfaction and an optimistic approach towards life. For the employer, it results in improved employee engagement and performance (Towers Perrin, 2000b). Employees who undertook a wellness program showed low stress levels and increased performance (Sommers-Krause, 2007). Studies have also produced the strongest link between WB and performance (Daniels and Harris, 2000).

2.3. EI and well being

Theory suggests that highly emotionally intelligent individuals are likely to experience psychological wellbeing at a higher level than individuals who are low in emotional intelligence (Carmeli *et al.* 2009). Those who are able to understand and regulate their emotions should be able to have better emotional health. Empirical evidence comes from research showing that there is a link between high EI and emotional well-being (Schutte *et al.* 2002). EI was found to have an association with mental health, psychosomatic health, and physical health (Schutte *et al.* 2007). EI is associated with positive moods and high self esteem (Schutte *et al.* 2002), stress levels (Petrides and Furnham, 2006), and life satisfaction (Palmer *et al.* 2002). The review of literature shows that if an employee possesses high EI, he is supposed to enjoy a positive state of WB, which reflects in his overall good health and improved performance. The literature review yields a framework for the study, as shown in Fig 1.

Figure 1: Framework for the study



Based on the above framework, the study has a broad objective of bringing out the empirical relationship between EI and WB, which yields a few sub objectives as stated below.

- To assess the EI levels of the employees
- To assess the state of well-being of the employees.
- To study the impact of age, education, and gender on the EI and WB levels of the employees
- To examine the relationship between EI and WB.

3. Methodology

3.1. Participants and Data collection

The IT/ITES sector of Tamilnadu was the sample frame for this study. Using convenience sampling, a sample of 200 was drawn from this sector. They belonged to various IT and ITES organizations of Tamilnadu, a state in South India. Their demographics are given in Table 1.

Out of the 200 respondents, 158 completed both the EI and WB measures, yielding a response rate of 79 per cent. Among the 158 respondents, 66 per cent were men and 34 per cent were women; their age group was between 20 and 45; 70 per cent of them were under graduates; 30 per cent were post graduates, and their average age was 26.

The Emotional Intelligence measure and well-being scale were made available as online tests for the respondents. Login credentials were created for the respondents and sent to them through E-mail. They took up the test at their convenience, by logging into the test page. The participants took 3 weeks to complete the test. Periodic reminders were sent to the respondents, based on Nunnally's (1978) criteria of .70 (Lenaghan *et al.* 2007). The overall score of WB is classified into 7 levels, as shown in Table 2.

Table 1: Demographics of the sample

Variable	Groups	N	%
Gender	Men	104	66
	Women	54	34
Education	UG	110	70
	PG	48	30

Table 2: Levels of WB

WB Score	Level
00-25	Severe
26-40	Serious
41-55	Distress
56-70	Stress Problem
71-75	Marginal Well-Being
76-80	Low-Positive Well-Being
81-110	Positive Well-Being

3.2. Measures

The research involved two measures, one for the independent variable EI and the other for the dependant variable well-being.

3.2.1. Dependant variable

The General Well-Being Scale (GWB) developed in 1970 for the National Center for Health Statistics, was used to measure the well-being. The GWB is a structured instrument for assessing self-representations of well-being. It assesses psychological and general well-being of respondents in six Health Related Quality of Life (HRQoL) domains: anxiety, depressed mood, positive well-being, self-control, general health and vitality. Each domain is defined by a minimum of 2 or a maximum of 4 items. The scores for all domains can be summarized to provide a summary score, which reaches a maximum of 110 points, representing the best achievable "well being". If the respondents get a higher score in the domains 'anxiety' and 'depressed mood', it means they do not have anxiety and depressed mood. For the rest of the domains, namely positive well-being, self-control, general health, and vitality, a higher score means they possess the qualities referred to by the domain names. The measure has been validated and is said to have good psychometric properties. This has also been adapted in many languages and cross-culturally validated for use in several countries, under the coordination of the MAPI Research Institute (Hoorn, 2007). An example of an item from this scale is "Have you been under or felt you were under any strain, stress, or pressure during the past month?" The internal reliability, as measured by Cronbach's alpha, for this study was .89, an acceptable level

3.2.2. Independent variable

For measuring emotional intelligence, an online test called Deepa Krishnaveni Emotional Intelligence Test (DKEIT) was used. This test is based on the conceptual definition that EI is the ability of an individual to perceive various emotional stimuli associated with his/her self and his/her environment, appraise and regulate them, in order to produce appropriate behavioral responses, resulting in improved intrapersonal and interpersonal outcomes. This definition yields three constituents of EI namely, perception, appraisal, and regulation. The DKEIT has three sections namely perception, appraisal and regulation. It contains 24 multiple choice questions to test the EI abilities of respondents. The structure of DKEIT, the sample items in each sub scale and the reliability of each sub scale are given in Appendix 1. The overall reliability of the scale is 0.8, which is acceptable as per Nunnally's (1978) criteria of 0.7. In tests that measure emotion related abilities, we cannot use expert scoring or target scoring methods because neither experts nor targets can arrive at a single correct answer. Consensus scoring method is an alternative to traditional methods of creating a scoring key for ability tests. In consensus scoring, a respondent's score on an item is based upon the responses of the norm group (which might simply be all those who responded to the item). When we use proportion consensus scoring, each respondent's score on an item is equal to the proportion of the norm group who match the respondent's answer. Research from a

The results from Table 5 show that gender has an influence on vitality only. Women have more vitality than men. The other components and the overall WB are not influenced by gender. The undergraduates have secured a higher score in general health and vitality. The postgraduates have more anxiety than the under graduates and there is a significant difference between the WB scores of undergraduates and postgraduates, with undergraduates reporting a higher WB. The correlation between EI and WB is shown in Table 6. The constituents of both EI and WB are included in the table for a complete analysis.

Table 6: Correlation between EI and WB

	P	A	R	EI	GH	V	PWB	DM	AX	SC	WB
P	*1.00*	**0.85****	**0.68****	**0.31****	0.12	0.11	0.05	0.05	0.08	0.03	0.14
A		*1.00*	**0.71****	**0.25****	0.04	0.1	0.06	0.13	0.13	0.1	**0.16***
R			*1.00*	**0.59****	0.02	**0.23****	**0.23****	**0.16***	**0.24****	0.11	**0.28****
EI				*1.00*	0.11	**0.34****	**0.31****	**0.33****	**0.4****	**0.19***	**0.49****
GH					*1.00*	-0.07	-0.02	-0.09	**0.18***	-0.08	**0.35****
V						*1.00*	**0.36****	**0.42****	**0.35****	**0.18***	**0.61****
PWB							*1.00*	**0.23****	**0.27****	**0.31****	**0.53****
DM								*1.00*	**0.36****	**0.21****	**0.63****
AX									*1.00*	**0.28****	**0.78****
SC										*1.00*	**0.49****
WB											*1.00*

Note: P = Perception; A = Appraisal; R = Regulation; EI = Emotional Intelligence; GH = General Health; V = Vitality; PWB = Positive Well-Being; DM = Depressed mood; AX = Anxiety; SC = Self-control; WB = Overall Well-being; * = Correlation is significant at the 0.05 level (2-tailed); ** = Correlation is significant at the 0.01 level (2 – tailed).

There is a significant correlation ($r=0.49$; $p<0.01$) between the overall EI score and the overall well-being score. Hence it is evident that individuals with high emotional intelligence are likely to experience a positive well-being state. A key finding from this study is that the emotional regulation component of EI is significantly correlated with vitality, positive well being, depressed mood, anxiety and overall well-being. The general well being scale score interpretation is such that if the respondents score high in depressed mood and anxiety components, then they do not have depression and anxiety. Hence, a correlation with depressed mood and anxiety means that people who have high emotional regulation capabilities will have less depression and anxiety. The perception component of EI is not correlated with any of the constituents of well-being. The appraisal component of EI correlates with overall WB ($r = 0.16$; $p<0.05$). The overall EI score correlates with vitality, positive well-being, anxiety (stress), depressed mood, and overall WB. However, EI does not correlate with General Health. EI was also found to correlate significantly with age ($r = 0.18$; $p<0.05$).

As there was a significant and strong correlation between EI and WB, a regression analysis was done, between the two variables, to bring out the impact of EI on WB. The results are shown in Table 7.

It is evident from Table 7 that EI has a significant impact on WB because it explains 24 per cent of the variance in WB ($r^2 = 0.240$). This is a significant number for a single predictor. WB is said to be influenced by (i) personality factors; (ii) contextual and situational factors; (iii) demographic factors; (iv) institutional factors; (v) environmental factors; and (vi) economic factors (Hoorn, 2007). Apart from these factors, this study has shown empirical

Table 7: Impact of EI on Well-Being

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	45.542	3.966		11.482	.000
	Emotional Intelligence	1.894	.270	.490	7.012	.000

Dependent Variable: Well Being; Regression ANOVA F Value = 49.164, Significant at 0.000 level
R Square = 0.240; Adjusted R Square = 0.235

evidence that EI is a significant predictor of WB. Hence by enhancing EI skills, we can improve the state of well-being of the individuals.

4. Discussion

The present study realized all its stated objectives and is a valuable addition to a growing body of literature seeking to determine the role of EI in explaining and individual's success and well-being. The study found that 40 per cent of the respondents had stress problems. This study adds strength to the previous findings on the same lines and exposes the threat to the WB of the work force. Earlier studies on the IT/ITES sector showed that about 30 to 40 per cent of the patients coming to psychiatrists are from the IT/ITES sector for problems of depression and stress disorders (Charan, 2007). In another survey (XLRI, 2009), 67 per cent of the IT/ITES employees reported headache , 53 per cent had physical symptoms of stress, 43 per cent had digestive upsets and restlessness, 27 per cent started to use drugs, alcohol and tobacco, 73 per cent experienced irritability, 67 per cent had mood swings, and 60 per cent had bad temper. Since IT professionals are more achievement oriented, they do not have much of a social life and the time spent with family is also less. There is also lack of recreation and opportunities to relax. This shows that the IT/ITES organizations should focus on the WB of their employees with utmost care.

With respect to the EI scores of the respondents, women have scored higher than men in perception and overall EI, which is in line with the findings of the literature review (Brackett *et al.* 2004; Brackett *et al.* 2005). There was no difference between men and women in the WB scores, which is in contrast to findings from a previous study, which states that women report higher WB than men (Hoorn, 2007). Education level has an influence on WB level, which is a new finding brought out by this study.

EI had a significant impact on WB. This finding adds strength to the previous research findings (Carmeli *et al.* 2009). The overall EI score is not correlated with general health, which is in contrast to the findings by Schutte *et al.* (2007). However, EI has a significant correlation with vitality, positive well-being, anxiety(stress), depressed mood, and overall WB, as brought out by previous studies (Petrides and Furnham, 2006; Schutte *et al.* 2002; Schutte *et al.* 2007). This study has replicated the previous findings and has added strength to the linkage between high EI and positive well-being. It is to be noted that the regulation component of EI is significantly correlated with vitality, positive well being, depressed mood, anxiety and overall well-being. Hence it is evident that we should focus on our emotional regulation abilities, to gain a state of well-being.

Emotional regulation is the ability to enhance or reduce emotions as needed in order to get positive outcomes. For example, if we are upset in the middle of work, we respond to it in two distinct ways. One way is brooding upon it and spoiling the forthcoming day. This will not fetch any positive outcome. The other way of responding is distracting ourselves from that situation and setting ourselves a positive note for the rest of the day. The second response is said to be the emotional regulation ability, which in turn is the constituent of EI. The ability to regulate your emotions for positive outcomes can be enhanced by reducing emotional instability, by practicing mindfulness skills and by learning to accept our emotions (Salters-Pedneault, 2009). EI was also found to correlate significantly with age ($r = 0.18$; $p<0.05$), which reinforces similar studies in the past (Law *et al.* 2004).

5. Conclusion

The findings of this study support a core proposition of the theory namely, the predictive role played by EI in experiencing a sense of well-being. The study showed that individuals who scored high in their Emotion regulation capabilities had high level of General Health and Vitality, experienced low levels of anxiety and depression and hence had a positive well being. Hence if we improve our EI ability, we can reach a higher well being state and also improve on many of our individual competencies, as shown in the framework of this study (Figure 1).

Although previous research works have examined the relationship between EI and a sense of well-being, they have focused on specific dimensions of well-being [(e.g. life satisfaction (Palmer *et al.* 2002); positive moods and self-esteem (Schutte *et al.* 2002); stress levels (Petrides and Furnham, 2006)] rather than on exploring the construct in its various dimensions. The current study has used a complete conceptualization of well-being with all its constituents and has examined the impact of EI on the overall WB and also all of its constituents. Hence this is an important finding with respect to the well-being of the IT/ITES sector, which is a major contributor to the economic growth of the country.

The study has important implications for the IT/ITES organizations. If they plan and implement training programs to improve the EI level of their employees, this will yield dual benefits. The employer is benefited by sustained employee engagement and performance and the employee is benefited by an enhanced well-being state, which in turn leads to optimism towards life, good health and a feeling of satisfaction.

There is plenty of scope for future research in this avenue. The moderators of the relation between EI and WB like age, gender, culture, and the predictors of WB like personality factors and environmental factors can be exhaustively studied. Studies can focus on the complete framework outlined in this study, to bring out the intricate relation between EI, WB and the various beneficial outcomes. Cross cultural studies, examining the three aspects of culture namely national culture, professional culture and organizational culture will help in generalizing the constructive relation between EI and WB.

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Appendix:

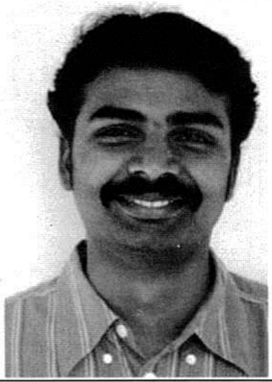
Structure of DKEIT

Sub Scale	Number of Items	Reliability (Cronbach Alpha)
Emotional Perception (P)	8	0.61
Emotional Appraisal (A)	4	0.63
Emotional Regulation (R)	12	0.8
Total	**24**	**0.8**

Sample items in DKEIT.

Section 1 – Emotional Perception

Please identify the emotions expressed by the following faces. Circle the appropriate emotion



1. **Happiness**
2. **Sadness**
3. **Fear**
4. **Anger**
5. **Surprise**
6. **Other**

Section 2 – Emotional Appraisal

Please read the following incidents and answer the questions given. Please select the appropriate emotional words from the choices given below each incident.

Your boss is a very reserved person and never appreciates a person quickly. He always critiques the work of his subordinates. He comes to your cabin and appreciates you for the recent project you have done. How will you feel? How will he feel?

My feeling	My Boss's feeling
a.Happy	a.Happy
b.Proud	b.Jealous
c.Surprised	c.Sad
d.Uneasy	d.Uncomfortable
e.No feeling	e.No feeling
f. Other	f.Other

Section 3 – Emotional Regulation

Please read the following situations and circle the appropriate response to the situation.

Your subordinate comes late to the office for the third time this month. He is talented and is valuable for the team. But his tardiness (coming late) is increasing nowadays. As a manager, what will you do?

i. I will seek more information on his late arrival and see if he has any personal issues due to which he is coming late. I will try to help him out of his issues.

ii. I will shout at him and tell him that he is careless and does not care a damn about discipline at work

iii. I will ignore this and decide to talk to him the next time he is late.

iv. I will call him and tell him that I am disappointed by his tardiness and warn him of stern action the next time he repeats it.

v. Other

An Analytical Study on Measurement of Risk and Volatility in Equity Market

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Abstract
This paper examines the relationship between the risk and volatility in the stock market. The main innovation is to construct a statistical technique to measure the risk associated with a particular stock and how volatile is the stock on that particular day. This measure is forward looking and does not rely critically on either realized equity returns or instrumental variables. The issues of volatility and risk have become increasingly important in recent times to financial practitioners, market participants, regulators, investors and researchers. Some of the main concerns, currently expressed are whether the financial system has become more volatile in recent times have financial regulation and innovation led to an increase in financial volatility or has it successfully permitted its redistribution away from risk averse operators to more risk neutral market participants; does the current wave of financial innovation lead to a complete set of financial markets, which will efficiently distribute risk; can financial managers most efficiently manage risk under current circumstances; what role the regulator goes out to play in this process? (Raju and Ghosh, 2004). This paper would be useful in debating all/some of these issues.

Key words: Close to Close Volatility, Inter-day Volatility, Intra-day Volatility, Open to Open Volatility, Risk and Volatility Analysis

1. Introduction

The equity market is a public market for the trading of company stock and derivatives at an agreed price; these are securities listed in a stock exchange as well as those which are only traded privately. The stocks are listed and traded in stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organization to a listing of stocks and securities.

The equity market volatility indicates the degree of changes in share prices during a particular period. A certain degree of fluctuation in the stock price indicates changing values across economic activities and it facilitates better resource allocation. Stock prices change everyday in the stock market. Buyers and sellers cause prices to change as they decide how valuable each stock is. Basically, share prices change because of the market forces of demand and supply. If more people want to buy a stock than sell it- the price moves up. Conversely, if more people want to sell a stock, there would be more supply (sellers) than demand (buyers) - the price would start to fall. Volatility is a symptom of a highly liquid stock market. Pricing of securities depends on volatility of each asset. An increase in stock market volatility brings a large stock price change (advances or declines). Investors interpret a raise in stock market volatility as an increase in the risk of equity investment and consequently they shift their funds to less risky assets. It has an impact on business investment spending and economic growth through a number of channels. Changes in local or global economy and political environment influence the share price movements and show the state of stock market to the general public. The issues of return and volatility have become increasingly important in recent times to the Indian investors, regulators, brokers, policy makers, dealers and researchers with the increase in the FIIs investment. Hence, in this paper an attempt has been made to analyse the following objectives.

2. Objectives

The objectives of the present study were – (i) to study the risk and return of individual sample stocks; (ii) To study the inter-day volatility of sample stocks; (iii) to study the correlation between risk and volatility of sample stocks; and (iv) To study the volatility models and their measurement of sample stocks.

3. Review of Literature

Williams S. (1989) revealed that there exists a relationship of stock volatility with real and nominal microeconomic volatility, economic activities, financial leverages and stock trading activities using monthly data from 1857 to 1987. An important fact, previously noted by the investors, is that stock return variability was unusually high between 1929-1939 during the great depression, while aggregate leverage was significantly co-related with volatility. It explains a relatively small part of the fluctuation in stock aggregate and that stock volatility is difficult to explain using simple model of stock valuation.

Eagle and Ng (1993) indicated that information (in the form of news) plays an important role in market volatility. Market information can and does lead to fluctuations in the indices of the stock market. He also examined the method of measurement of the stock market volatility and also that of each company's stock.

Antoniou and Holmes (1995) studied about the future trading, information and spot price volatility. They took the evidence for the FTSE-100 stock index future contracts using GARCH model.

Peter Johnson (2008) examined the behaviour of stock market based on technical analysis to draw attention of retail investors. He also explained how an investor can become gainer by investing in a portfolio and the underlying risk attached to these portfolios.

Punithavathy and Queensly (2009) examined stock market volatility in the Indian stock market and were of the opinion that the bull phases volatilities were lower than bear phases.

Bali and Hovakimian (2009) investigated whether realized and implied volatilities of individual stock can predict the cross-sectional variation in expected returns. Although the levels of volatilities from the physical and risk-neutral distributions cannot predict future returns, there is a significant relationship between volatility spreads and expected stock returns.

4. Methodology

The topic *"Measurement of Risk and Volatility in Equity Market"* was selected considering the growing requirements and necessities of the investors as well as for the company. Volatility associated with stock market is the major concern for the investor. Although the companies have calculated the volatility associated with their scrip's the retail investors do not know how to measure the volatility of any stock in the equity market. The volatility speaks of the range of fluctuation of price of stock of any company in an intra-day, monthly-basis, quarterly-basis, and also on annual-basis. It provides a guideline to the investors as to where to invest and how to invest. It also gives an idea to the investors which stock is profitable in intra-day trading. Keeping this in view, the topic has been selected to make the investor aware about the risk and volatility associated with a particular stock in the equity market.

Data were collected from BSE Sensex and NSE Nifty for calculating return and volatility. Sensex is a basket of 30 constituent stocks representing a sample of large, liquid and representative companies. Due to its wide acceptance amongst the Indian investors, sensex is regarded as the pulse of the Indian stock market. Nifty is a well diversified 50 stock index accounting for 24 sectors of the economy. Hence these two indices were taken for the study. Thus, the number of sample units for this study is two.

There are 500 Fortune companies and many more incorporated companies operating in India. The study is conducted on the basis of data collected from five premier companies which are from five different sectors. These companies have been selected on the basis of their market capitalization and their influence over the equity market. Further, the trading of these stocks significantly influences the indices of both the stock exchanges. The companies selected under the study are; *Tata Steel,* *Unitech, M & M, SBI and Maruti.*

4.1. Sources of Data Collection

The study is conducted on the basis of secondary data, which is available on ICICI DIRECT.COM, BSEINDIA.COM, NSEINDIA.COM, MONEYCONTROL.COM, MONEYBHAI.COM, P.R. GROUP.

4.2. Study Design

The existing study is based on quantitative analysis of the secondary data with respect to risk and volatility. The 1st phase has been prepared after due consideration of the companies stock price and their responsiveness towards the stock. This study has been conducted on the basis of the closing price of the stock. But the 2nd phase is the quantitative part which employs different statistical tools to measure the volatility associated with the stock of different companies.

4.3. Statistical Methods

The statistical methods used in the study are Mean, Standard Deviation, Variance analysis, Correlation and Regression analysis.

4.3.1. Beta

Beta is calculated to know the volatility of the stock's return. Beta is the slope of the characteristics regression line. Beta describes the relationship between the stocks return and the index return. In this project, the study is conducted on the comparison of some stocks return with the NSE index return. The formula to calculate beta is:-

$$\beta = \frac{n\sum XY - (\sum X)(\sum Y)}{n\sum X^2 - (\sum X)^2}$$

4.3.2. Alpha

ALPHA is the y-intercept of the characteristic regression line; the distance between the intersection and the horizontal axis. It indicates that the stocks return is independent of the market returns. A positive value of alpha is a healthy sign. Positive alpha values would yield profitable return. The formula to find out alpha (α):- $\alpha = \bar{Y} - \beta\bar{X}$, Where, $\bar{Y}$ = Mean of the stocks $\bar{X}$ = Mean of the index return, β = Beta.

4.4. Inter-day volatility

The variation in share price return between the two trading days is called inter-day volatility. Inter-day volatility is computed by close to close and open to open value of any index level on a daily basis. Standard deviation is used to calculate inter-day volatility.

4.4.1. Close to Close Volatility

For computing close to close volatility, the closing values of the Nifty and Sensex are taken. Close to close volatility (standard estimation volatility) is measured with the following formula.

$$\delta = \sqrt{\frac{1}{n-1}\sum(r_t - \bar{r})^2}$$

Where, n = the number of trading days, r_t = close to close return (in natural log), δ = average of the close to close return.

4.4.2. Open to Open Volatility

Open to open volatility is considered necessary for many market participants because opening prices of shares and the index value reflect any positive or negative information that arrives after the close of the market and before the start of the next day's trading. The following formula is used to calculate open to open volatility:

$$\delta = \sqrt{\frac{1}{n-1}\sum(r_t - \bar{r})^2}$$

Where, n = the number of trading days, r_t = open to open return (in natural log), δ = average of the close to close return. Inter-day volatility takes into account only close to close and open to open index value and it is measured by standard deviation of returns.

4.5. Intra-day volatility

The variation in share prices return within the trading day is called intra-day volatility. It indicates how the indices and shares behave in a particular day. Intra-day volatility is calculated with the help of Parkinson Model and Garman and Klass model.

4.6. Parkinson Model

High-low volatility is calculated with the following formula:

$$\delta = k\sqrt{\frac{1}{n}\sum \log\left(\frac{H_t}{L_t}\right)^2}$$

Where, δ = high-low volatility, k = 0.601, H_t = high price on the day, L_t = low price on the day, n= number of trading days

4.7. Garman and Klass Model

The Garman and Klass model is used to calculate the open-close volatility. The formula for Garman and Klass Model takes the following form.

$$\delta = \sqrt{\frac{1}{n}\sum[\log\left(\frac{H_t}{L_t}\right)]^2 - [2\log(2) - 1][\log\left(\frac{C_t}{O_t}\right)]^2]}$$

Where, δ= Intra-day volatility for the period, H_t = High price on the day, L_t = Low price on the day, C_t = Closing price on the day, O_t = Opening price on the day, n= Number of trading days.

5. Data analysis

Data Analysis has been carried out on the basis of data collected from BSE Sensex and NSE Nifty, for calculating the return and volatility. Sensex is a basket of 30 constituent stocks representing a sample of large, liquid and representative companies. Due to its wide acceptance amongst the Indian investors, Sensex is regarded as the pulse of the Indian stock market. Nifty is a well diversified 50 stock index accounting for 24 sectors of the economy. Hence these two indices were taken for the study. Data were taken from 1st April to 30th June of 2009.

Table 1: Risk and Return of Individual Stock

Company (Stock)	Avg. Return	Std. Dev. (Risk)
Tata Steel	0.93	5.37
SBI	1.15	6.74
Unitech	0.42	2.80
M & M	0.75	3.90
Maruti	0.81	4.39

Table 1 reveals that the average return of the sample stocks of different companies ranged from 0.42 to 1.15. The Unitech Company gives the highest return among the five companies, followed by Tata Steel (0.93), M & M (0.75), SBI Bank (1.15) and the lowest return is given by Maruti. The riskiest company is SBI among the five Companies which bears a risk of 6.74% while other companys' risk varies from 5.37% (Tata Steel) to 2.80 (Unitech) which gives the lowest risk in comparison to the other stocks.

A probe into the data reveals that the daily average return of *M&M* stock was 1.497 and 2.9317 in Nifty and Sensex, respectively (Table 2). The stock showed a better performance in Sensex than Nifty in the month of April. In the month of May, there was the same level of performance in both the indices. The maximum stock price was 678.15 and 678.65 in Nifty and Sensex respectively. But in the month of June, the stock performance was neither good nor bad; the return was 0.204 and 0.168 percent respectively in the indices.

The average return of *Unitech* was positive throughout the first quarter. The company's return was high in May at 3.279 per cent. But the company's daily average return increased from 1.667 to 3.27 in Nifty index from April to May whereas there was no substantial increase in return in Sensex index at 3.1667 to 3.277. In April, there was a difference of 17.2 between the maximum and minimum stock price of the Company. But there was a huge difference of 31.65 in the stock in the month of May and average return of 3.27745.

The daily average return of the *Maruti* stock was positive in these three months. The company showed a good performance in the month of May. The company's maximum and minimum stock price in April was 855.15, 754.15 and 851.55, 754.25 in Nifty and Sensex respectively. The daily average return of the company of Nifty and Sensex in April was 0.86 and 1.2017 respectively. That increased to 1.236 and 1.204 in the month of May. But in the month of June the stock faced a downward trend in

Table 2: Month-wise Daily-Basis Av. Return of Company Stocks in Nifty and Sensex (1st April to 30th June)

Company (Stock)	Month (2009)	Name of the indices	Minimum Index level	Maximum Index level	Daily basis average return
M & M	**April**	Nifty	487.95	394.95	1.497
		Sensex	486.25	394.64	2.9317
	May	Nifty	678.15	493.4	1.781
		Sensex	678.65	494.25	1.7837
	June	Nifty	811.4	689.1	0.204
		Sensex	815.3	689.75	0.1684
Unitech	**April**	Nifty	53.95	36.75	1.667
		Sensex	53.75	36.8	3.1667
	May	Nifty	79.6	48.05	3.279
		Sensex	79.75	48.1	3.2774
	June	Nifty	97.8	76.1	0.176
		Sensex	97.8	76.4	2.9794
Maruti	**April**	Nifty	855.15	754.15	0.86
		Sensex	851.55	754.25	1.2017
	May	Nifty	1041.85	808.55	1.236
		Sensex	1043.4	809.2	1.2049
	June	Nifty	1109.35	1025.8	0.201
		Sensex	1109.45	1026.9	0.2080
SBI	**April**	Nifty	1311.15	1077.45	1.126
		Sensex	1307.8	1073.95	1.082
	May	Nifty	1868.85	1258.2	2.0648
		Sensex	1869.1	1260.7	1.722
	June	Nifty	1906.9	1637.6	-0.276
		Sensex	1909.5	1637	-0.311
Tata Steel	**April**	Nifty	293	209.8	1.005
		Sensex	293.35	209.85	0.89
	May	Nifty	405.35	260.2	2.864
		Sensex	406.3	263	2.35
	June	Nifty	488.1	388.3	-0.05
		Sensex	487.9	387.9	-0.41

comparison to the month of May. There was 84.9% decrease in the daily average return of the company between May and June.

The daily average return of *SBI* in Nifty and Sensex in April was 1.126 and 1.082 respectively. There was 83.37% increase in daily average return in Nifty in comparison to Sensex's increment of 59.25% in the month of May. But in the month of June, there was a negative return in both the indices. As regards daily average return, it was -0.276% in Nifty and -0.311% in Sensex.

Finally, the daily average return of *Tata Steel* also showed a positive return in the first two months of first quarter of the financial year. The company's daily average return was 1.005 and 0.89 percent in Nifty and Sensex respectively. The daily return increased from 1.005 to 2.864 as 184% increment in the return of the company in May. But in the month of June the Nifty and Sensex return was -0.05 and -0.41 respectively. The stock price decreased 102% in June.

5.1. Inter-day volatility

Inter-day volatility is measured by the calculation of return deviated from open to open and close to close return and volatility. TATA Steel, in the month of April, revealed a high volatility. In this month, the close to close volatility was 5.5876 and 5.7656 in Nifty and Sensex respectively. The inter-day volatility increased by 20% in both the indices to 6.1156 and 6.0550 respectively. But there was a sharp decline in close to close volatility in June (Table 3).

Table 3: Inter-day volatility of companies

Month (2009)	Company	Close – Close		Open-Open	
		Nifty	Sensex	Nifty	Sensex
APRIL	Tata Steel	5.5876	5.7656	5.9201	5.8970
	SBI	3.5101	3.5554	5.0835	3.6310
	Unitech	8.0621	8.0373	7.0150	8.3465
	M & M	3.9736	4.5093	3.9559	3.5327
	Maruti	2.6775	2.7225	3.6341	3.3036
MAY	Tata Steel	6.1156	6.0550	6.6169	5.6262
	SBI	5.8084	5.8034	5.0835	5.4589
	Unitech	7.9374	7.8336	7.8652	8.0236
	M & M	6.6598	5.7099	5.4464	4.1741
	Maruti	3.7938	4.9350	3.4779	4.1782
JUNE	Tata Steel	4.9429	4.8458	6.6651	6.1029
	SBI	2.6816	2.6659	4.3156	2.9343
	Unitech	6.0094	6.5188	9.0475	6.6882
	M & M	3.3733	3.3196	3.9735	4.7146
	Maruti	2.0170	6.0387	2.5423	6.9068

5.1.1. SBI Bank

SBI- India's No.1 Bank in the public sector showed a moderate volatility throughout the first quarter of this year. The close to close volatility in April was 3.5101 and 3.5554 in Nifty and Sensex respectively. In the month of May, it increased by 65% and 63% in Nifty and Sensex respectively. But in the month of June, the SBI faced sharp decline in close to close volatility.

Open to open volatility for SBI in April in Nifty and Sensex was 5.0835 and 3.6310 respectively. Further, it was observed that there was an increase of volatility from 3.6310 to 5.4589 in Sensex whereas there was no increment of volatility in the Nifty. But in June, there was a sharp fall in volatility. In June, open-to open volatility was 4.3156 and 2.9343 in Nifty and Sensex respectively.

5.1.2. Unitech

Unitech, the major infrastructure company in India showed a high volatility and high risk throughout the first quarter. The close to close volatility in Nifty and Sensex in April was 8.0621 and 8.0373 respectively. Due to the high volatility, there was an involvement of high risk and high return. In the month of May, the close to close volatility decreased to 7.9374 and 7.8336 in both the indices. Again, the volatility reduced to 6.0094 and 6.5188 in Nifty and Sensex, respectively.

The open to open volatility fluctuated sharply throughout these three months. The open-open volatility in Nifty and Sensex in April was 7.0150 and 8.3465, respectively. In this case, the Sensex showed more volatility than the Nifty. The volatility increased to 7.8652 in Nifty but slightly reduced from 8.3465 to 8.0236 in Sensex. Again in June, this volatility increased from 7.8652 to 9.0475 in Nifty but in Sensex this volatility reduced sharply from 8.0236 to 6.6882.

5.1.3. M&M

The close to close volatility of M&M Company in Nifty and Sensex in April was 3.9736 and 4.5093 respectively. This is the moderate volatility. It would give moderate return as there was moderate risk. In the month of May, the volatility peaked by 67% and 26% both in Nifty and Sensex respectively. This volatility however decreased by 49% and 41% in Nifty and Sensex, respectively.

The open to open volatility in Sensex and Nifty ranged from 3.9559 to 5.4464 and 3.5327 to 4.7146 respectively. In April, it was 3.9559 and 3.5327 in Nifty and Sensex respectively. It was a moderate volatility in that month. The open –open volatility increased to 4.1741 in Sensex whereas it sharply increased to 5.4464 in Nifty. But in both the indices, there was the sharpest fall in June to 3.9735 and 4.7146 in respective indices.

5.1.4. Maruti

The close to close volatility of Maruti Company in April was 2.6775 and 2.7225 in Nifty and Sensex respectively. This volatility increased to 3.7938 in Nifty and 100% increase in Sensex to 4.9530 in May. Again in June, in Nifty the close to close volatility decreased by 46% whereas it increased by 22% in BSE Sensex.

The open to open volatility of Maruti Company in April was 3.6341 and 3.3036 in Nifty and Sensex. There was no increment in the month of May in this volatility. But in June, open to open volatility of Maruti Company in the Nifty index decreased sharply by 26% to 2.5423. In Sensex, there was only 3.3036 open to open volatility in the month of April. Then it increased by 26% to 4.1782 in May. In June, the stock showed the volatility in the upward direction. The volatility in the month of June was 6.9068 that was the highest volatility of Maruti Company in the first quarter.

5.2. Correlation between risk and return

The correlation between the market index and share return of each company are positively correlated that varied slightly from 0.663 to 0.785 (Table 4). The beta value indicates the volatility of the stock. The volatility ranges from 0.66 to 1.59. The most volatile company is Unitech and the least volume is Maruti Company. The second most volatile company is M & M i.e. 1.22% and the third one is 1.03%.

Table 4: Correlation of risk and return of sample stocks

Company (Stock)	R	β	α
Tata Steel	0.678298	1.03	0.43
SBI	0.663304	1.59	0.84
Unitech	0.655474	0.66	0.15
M & M	0.785821	1.09	0.7
Maruti	0.764486	1.22	0.25

5.3. Volatility models and their measurement

Intra-day volatility was developed by two economists Parkinson and Garman & Klass. Parkinson developed the high-low volatility where as Garman & Klass developed the open-close volatility in the equity market.

The above table (Table 5) depicts the high – low volatility and open-close volatility of the major 5 companies i.e. Tata Steel, Wipro, M&M, Unitech ad Maruti Company.

5.3.1. Tata Steel

The high-low volatility of Tata Steel in Nifty and Sensex was 0.0436 and 0.2681. It was higher in Sensex than in Nifty. It was observed that the Sensex intra-day volatility was more than that of other indices of our country, which always happens. In May, this volatility decreased in Nifty from 0.0436 to 0.0306 whereas in Sensex it increased to 0.3060. But, in the month of June, Nifty increased to 0.0364 whereas in Sensex, it fell to 0.2425.

Table 5: Models of Volatility Measurement of Sample Stocks (Index-wise)

Month	Company	Parkinson High - Low		Garman & Klass Open-Close	
		Nifty	Sensex	Nifty	Sensex
April	Tata Steel	0.0436	0.2681	0.1866	0.7568
	SBI	0.0296	0.2283	0.1639	0.7510
	Unitech	0.0670	0.3268	0.1866	0.8019
	M & M	0.0365	0.2487	0.1541	0.7596
	Maruti	0.0285	0.0.2143	0.1568	0.7456
May	Tata Steel	0.0306	0.3060	0.1915	0.7997
	SBI	0.0312	0.2232	0.1706	0.7497
	Unitech	0.0494	0.2816	0.2104	0.7757
	M & M	0.0441	0.2421	0.1829	0.7574
	Maruti	0.0265	0.2241	0.1564	0.7410
June	Tata Steel	0.0364	0.2425	0.1680	0.7684
	SBI	0.0239	0.1932	0.1290	0.7382
	Unitech	0.0468	0.2774	0.2408	0.7734
	M & M	0.0321	0.2233	0.1847	0.7489
	Maruti	0.022	0.1894	0.1469	0.7371

The open to open volatility of Tata Steel in April was 0.1866 and 0.7568 in Nifty and Sensex respectively. The Garman and Klass volatility in May increased in both the indices. In May, the volatility was 0.1915 which increased by 2.62% in Nifty and in Sensex, it increased by 5.6%. But in June, the Tata Steel open to open volatility was 0.168 and 0.7684 in Nifty and Sensex respectively.

SBI's high-low volatility in Nifty and Sensex was 0.0296 and 0.2283 in April respectively. It was also observed that there was an increment on close to close volatility in Nifty and decrement in Sensex as well. In June, the high-low volatility was 0.0239 and 0.1932 in Nifty and Sensex respectively.

5.3.2. SBI Bank

The open-close volatility of SBI Bank in April was 0.1639 and 0.7510 in Nifty and Sensex respectively. In May, it increased by 4% in Nifty whereas in Sensex it decreased by 9%. Again in June, the open to close volatility decreased sharply in both the indices from 0.1706 to 0.1290 and 0.7497 to 0.7382 respectively.

5.3.3. Unitech

Parkinson's high – low volatility for Unitech Company in April was 0.0670 and 0.3268 in Nifty and Sensex respectively. In May, it decreased in both the indices. But the high-low volatility in the month of June was 0.0468 in Nifty and 0.2774 in Sensex.

Garman and Klass open-close volatility for the month of April was 0.1866 and 0.8019 in Nifty and Sensex respectively. In May, the open to close volatility was 0.21004 and 0.7757 in both the indices. But in the month of June the volatility increased in Nifty by 14% and in Sensex by 0.29%.

5.3.4. M&M Company

The high-low volatility of M & M Company in April was 0.0365, which was the second lowest among five sample stocks of the companies under the study but in Sensex it was third lowest after SBI and Maruti at 0.2487. In May, this volatility increased to 0.0441 from 0.0365 and 0.2421 from 0.2487 in Nifty and Sensex respectively. Comparing May and June results for M & M Company the volatility was higher in May. In June, the close to open volatility was 0.0321 which decreased by 27% in Nifty; and in Sensex it decreased from 0.2421 to 0.223.

But in Garman & Klass model, the open to close model for M & M Company in April was 0.1541 and 0.7596 in Nifty and Sensex respectively. The open to close volatility in May increased to 0.1829 and 0.7574. In June M & M Company's intra-day volatility increased slightly at 0.1847 and decreased to 0.7489.

5.3.5. Maruti

The high-low volatility for Maruti Company in April in Nifty and Sensex was 0.0285 and 0.2143 respectively. In the month of May, the high-low volatility decreased to 0.0265 in Nifty and in Sensex it increased to 0.2241. But in the same period the Parkinson's open-close volatility was 0.22 and 0.1894 in Nifty and Sensex respectively.

6. Conclusion and recommendation

The prospects for investment in capital markets in India seem to be good. The balance sheets of banks, corporates and financial institutions look strong. Despite world-wide recession, most of the companies in India are witnessing a positive trend. Although some of the companies did suffer in 2009, first quarter results indicate about the recovery from recession to some extent which was reflected in our stock market. India's stock market is a big market in the world in trading and also in capital adequacy. The above discussed five companies are from different sectors. These are from automobile, infrastructure, finance, steel and banking sectors. In the recent scenario, the infrastructure, bank, steel and automobile sectors suffered a lot. The stock market now is progressing with little fluctuation because of profit booking and short selling by small and retail investors.

From the above study, it is concluded that the highest volatile company gives more returns to the investors in an intra-day trading and they are riskier than the other companies'. The investors who trade in intra-day basis will get more returns than those who are inter-day traders. The inter-day traders bear lesser risk than the intra-day traders. Therefore, the inter-day trader gets less return than the intra-day trader.

7. Implications for future research

The present study lays down the foundation for carrying out further research in the field of risk and volatility analysis in the stock market. Although the literature on stock market volatility is voluminous, some general conclusions on common stock risk have emerged from this research. The overall stock market volatility has fluctuated over the time with no discernible trend and some authors have argued that volatility is higher during the bear markets. In this study, inter–day and intra-day volatility are calculated which provides a basis for investors and researchers to carry forward their research work in a more meaningful manner. The approach and the analytical framework of the study can provide researchers an insight into the research design and data analysis. The findings and recommendations of this study can also be used by research scholars to redesign their framework for further analysis. One of the major drawbacks of this study is the small sample size. A larger sample size could have produced better results. The study does not attempt to generalize the factors under consideration and is kept for open discussion.

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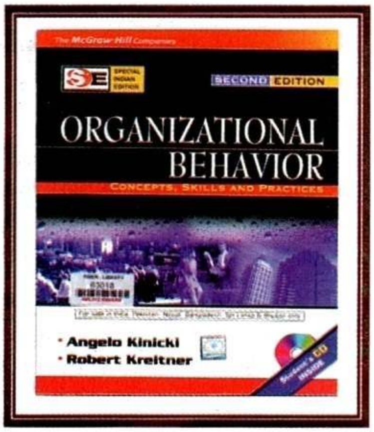

Organizational Behaviour : Concepts Skills and Practices

Angelo Kinieki and Robert Kreitner

Tata McGraw-Hill Publishing Company Limited, New Delhi (2009)

Organizational Behavior, as discipline, has gained importance in the present management education. It can be seen rooted in the discoveries of Elton Mayo and his associates in the Human Relations Movement in early 1930's. Since then management began looking for new ways of handling employees and started paying attention to the 'human' factor. Managing people in an organization involves three levels i.e. individual, group and organizational. Hence Organisation Behaviour draws upon a diverse array of disciplines especially Social sciences. Due to this richness, large number of research studies and conceptual developments are constantly adding to its knowledge base. Now it is realized that a concerted approach is essential to better understanding and managing people.

Scores of books are available on Organisation Behaviour. However, many are esoteric and lopsided and indifferent in the treatment of various aspects. In this context the present book is a comprehensive text and covers all aspects on the subject matter.

The book under review authored by Kinicki and Kreitner has five parts and covers sixteen chapters and each chapter is followed by skills and best practices and hand on exercise.

In the first part the authors begin with managing people in global economy which consists of three chapters. Chapter 1 includes Needed: people centered managers and workplace, impact of positive psychology and e-business. The authors have well begun by depicting past and present field of Organisation Behaviour. The chapter ends with an ethics learning module.

Chapter 2 and 3 emphasizes on the organizational culture, socialization and mentoring. It is now imperative for all organizations to develop an enabling culture for its sustenance. The authors have demonstrated the importance of socialization and mentoring in developing global managers. Beginning with ethnocentrism the authors conclude with failure of US managers in foreign assignments.

Part II devotes to the individual dimensions of Organisation Behaviour and covers chapter 4 to 8. Chapter 4 discusses about social perception and managing diversity. Chapter five focuses on individual differences and explains self concept, personality and emotions. Motivation is discussed in chapter six and seven chapter six projects needs, job design and satisfaction, while equity expectation and goal setting is explained in Chapter 7. Chapter 8 projects improving performance with feedback, rewards and positive reinforcement. Important individual dimensions are explained is an exhaustive manner.

Part III focuses on making Decisions and managing social processes and is structured into three chapters. Chapter 9 deals with Making Decisions, Effective groups and team work is explained in chapter 10 and eleventh chapter is about managing conflict and negotiating. Though the chapters seem to be relevant there appears to be omission of some important social processes.

Managing organizational processes is addressed in part four and it covers twelve to fourteen chapters. Chapter 12 delves on communication. Influence, power and polities is addressed in chapter 13 and leadership is discussed in chapter 14. The chapters no doubt reflect the organizational processes.

Finally, Part V ddresses the contemporary important issues of managing evolving organizations and is explained in fifteen and sixteen chapters. While chapter 15 focuses on effective organizational design, the last chapter discusses managing change and organizational change.

The authors have aimed to create a short, up-to-date, practical, user friendly and interesting book and no doubt they have justified and is worth reading .The authors have well articulated all the chapters by giving a blend of theory and practice. The content has been planned well and reflects good quality. No book can be expected to deal with all aspects. Since Organization Behavior is a very wide subject it is possible some topics may be omitted. However, inclusion of important emerging topics like stressandcounseling,group dynamics and organizationaldevelopment would have enrichedorganizational behaviour field. The authors should definitely be acknowledged for writing the book deceptively simple and jargon free with suitable pictures and hand on exercises. The authors have definitely added fresh and challenging insights into OB area. It is a useful contribution to the OB literature and can be used by students, Academicians and practitioners.

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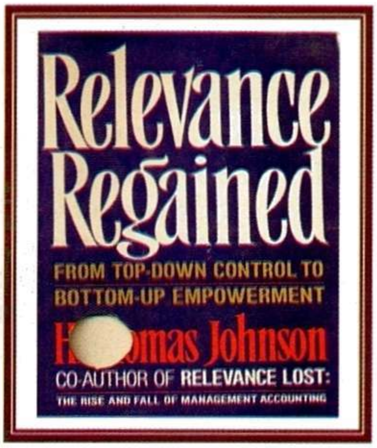

Relevance Regained:
From Top-Down Control to Bottom-Up Empowerment

H. Thomas Johnson

Free Press, New York

Prof. H. Thomas Johnson is known for his contribution in the area of Quality Management. "Relevance Regained", the book under review is an outcome of the third phase of his research. Prof. Johnson says, "This book builds upon research into management methods and management accounting that I have conducted since 1969. That research divides into three phases and three books". (p.217). The first two phases of his research culminated in the books : 1) A New Approach to Management Accounting History (New York, Garland Publishing, 1986) and 2) Relevance Lost: The Rise and Fall of Management Accounting (Boston, Harvard Business School Press, 1987) co-authored with Robert S. Kaplan. Prof. Johnson explains, "I developed ideas for this book between 1987 and 1991 in over a hundred presentations and more than twenty five articles that dealt with questions not answered to my satisfaction in Relevance Lost. (p. 217).

The book is divided into three parts and eleven chapters. Titles of these parts explain Prof. Johnson's underlined theme of each of the parts. It may be summarized as follows.

Part I Chapter 1 to 3: Relevance Lost in Top-down Control

Management Accounting information does not and cannot address the imperatives of competition in today's global economy. How American businesses after the 1950s by using top-down accounting results to control behavior, impaired their ability to run flexible processes capable of adapting to and capable of satisfying customers' expectations.

Part II Chapters 4 to 9: Relevance Regained by Bottom-up Empowerment

Management information's true function must be to help companies respond to the real imperatives of global competition - responsiveness and flexibility. How process-level information can enable employees to achieve the flexibility and responsiveness companies acquire to compete on a global basis. Flexibility is achieved by reducing output variation in processes, thus eliminating delays and excess caused by variation. Responsiveness is achieved by building relationships that lead to satisfied Customers, suppliers and employees.

Part III Chapter 10 to 11: Information, Empowerment and Society

Both the imperatives of global competition are achieved by companies that empower employees to solve problems and to improve constantly the output of processes. Prof Johnson calls this as "the bottom- up empowerment" approach. Why and how business schools rethink everything they do in teaching, research, and management. Also explains the implications for business schools of addressing the imperatives of competition in a global economy. Why and how business leaders must not lose the opportunity the information revolution gives them to build their organizations upon a foundation of democratic principles and dignified human goals.

Prof. Johnson has written this book in a very simple and straight forward manner. He has given ample examples to support the themes advocated and explanations given. At the beginning of Preface he states: "Everyone in the business world today realizes that the key to long-term competitiveness is total customer satisfaction. To profitably satisfy its customers in the long run, a company must be run as though the customer were in charge". At another point, he explains, "Empowerment implies ownership of information the key to learning. Constant learning by empowered workers is the key to change". Figures P-l and P-2 depict "the bottom Empowerment Cycle" and the "Top-Down Control Cycle" in a very precise manner and distinguish them very clearly.

Prof. Johnson explains: "Whereas managers before the 1950s seemed content to periodically check outcomes of properly managed processes with accounting information, managers after the 1950s encouraged people to achieve accounting results by manipulating outputs of processes". (p. 24) He gives three examples of managers in the first category: (i) Andrew Carnegie in the late 19th Century, (ii) Henry ford in 1920s and (iii) Alfred Sloan in the 1920s and 1930s. Mesta Machine Company's example is given as "a company that crumbled in the 1970s and 1980s as a direct result of top management by remote control". (p.29) Prof. Johnson also cites "three excellent examples of contribution margin pricing folly" recounted by management scholar John Shank. (p.46) He also explains new approaches and techniques like JIT, MRP, ABC, TQM etc, their advantages and limitations and concludes that: "In the end a few important gains take place, but not the sustained and continuous improvement achieved by a world-class competitor". (p.6) Prof. Johnson has compared the approaches of American manufactures and their Japanese counterpart in the following words: "Scale economies and volume of output were regarded as key imperatives of competition (by Americans). Process-minded Japanese manufacturers, however, were geared up by the late 1960s to work no faster than demand required, to change over quickly to run balanced, linked processes with little interruption and to do work right the first time". (p.44) Doing thins right the first time was "a message Dr. W. Edwards Deming reinforced in his famous presentation to Japanese manufacturing executives during the summer of 1951". (p.43)

While a critique on "Top-down Control", as explained above, formed Part I of the book, its Part II deals with bottom up empowerment to enable companies to become globally competitive. Prof. Johnson deals with this by discussing imperatives of competition (Chapter 4), responsiveness (Chapter 5), flexibility (Chapter 6), and management information for competitive excellence (Chapter 7), Activity-based cost management (Chapter 8), and an improvement process (Chapter 9). He gives examples of Carnegie's Edgar Thomson works and Ford's River Rogue system as companies wherein quality performance (and not financial manipulation)" dictated their business leadership" (p.61). Table 4.1 gives summary of earmarks of business behavior during "remote control regime" and present time requirement of "global excellence (p.71). Prof. Johnson asserts: "Global competitors believe the business of management is people, not finance" (p.72). He gives examples of Toyota Motor Company (p.82) and Direct Tire Sales in Watertown (Massachusetts) (p.83) as they became responsive and developed "long-term, mutually dependent relationship with customers". Following strategies that "improve one's ability to do whatever customer wants, when the customer wants it, at little or no extra cost" is flexibility and that is competitiveness (p.92). Prof. Johnson stresses the point that removing constraints (like set-up and changeover, work layout, product design etc) is the pathway to flexibility (p.93). "The main thrust of everyone's attention in the flexible organization is eliminating work by locating and removing sources of delay, excess and variation that make work necessary" (p.96). Prof. Johnson concludes: "The global economy compels companies to recognize that their most important arrest is the power of people workers, managers, suppliers and customers to remove constraints that impede flexibility" (p.I03).

About management information, Prof. Johnson advises the companies to unplug their operating control systems from accounting controls. Opportunities for outsourcing decisions, opportunities for continuous improvement and opportunities to cut lot sizes can be captured by removing constraints and eliminating work. Support for strategy to capture these opportunities requires "new management information that is real-time and problem-solving-oriented" (p.130). Prof. Johnson gives GE's example (p.134) in the context of Activity-Based-Costing (ABC). "Activity-based Prescriptions for improved competitiveness usually entail steps that reduce costs or raise margins while doing "business as usual" ... But something more is needed to continuously improve the output of customer-focused processes, "Johnson Concludes (p.153). He insists upon "putting an improvement process in place". He gives five important points about the concept of an improvement process after explaining the process that was carried out at GE, The Weyrhaeuser Company and Connor Formed Metal Products (Los Angles).

Part III of the book has two concluding and important chapters - one on business education and another on information revolution. Prof. Johnson has criticized university business schools in the US on the ground that "they have failed to understand or teach the skills and knowledge businesses need to compete in the global economy" (p.195) and asked them to change to satisfy their customers (i.e. industries). Lastly Prof. Johnson advocates that the business leaders must build their organizations upon a foundation of democratic principles and dignified human goals on the basis of opportunity provided by the information revolution.

This review may be concluded with Robert W. Hall's phone conversation with Prof. Johnson on May 2t 1991 (which is quoted at the beginning of Chapter 9). Hall says: "Every company can buy the same technologies and tools, but not the same people power. That you must create inside. That is the ultimate source of competitiveness".

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