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Contents

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The Chairman speaks ...

Economic growth in India has been a serious topic for discussion and debate world over since the country has grown to be one of the best performers in the global economy in recent times. The economy has grown by more than nine percent for three years consecutively and it has resulted in a decade of seven percent growth on an average. This impressive performance of the economy has been made possible because of the structural transformation brought in by the Government through various measures adopted for accelerating growth.

But, contrary to our expectations of sustaining this growth rate, it slipped to 7.9 percent in the first quarter of this year from 9.2 percent for the corresponding period of the previous year. This is for the first time that India's GDP growth has recorded a figure less than eight percent in nine quarters, since December 2004. Constraints like rising inflation, oil price rise, poor infrastructure and the complexities of running the world's biggest democracy can be pointed out as major reasons for the slump. Naturally, failure of the economy to sustain its growth rate has generated intense debate on India's future economic prospects.

It is in this context that we bring to you a paper on "Structural transformation: Economic growth in India," by Ms. Meg Hendricks, University of Denver and Dr. Kishore G. Kulkarni, Professor of Economics and Editor, *Indian Journal of Economics and Business,* Metropolitan State College of Denver, Denver, USA, as the lead article in this issue. As you might be aware, Dr. Kulkarni is also a member of our Editorial Advisory Board and a visiting faculty.

Measuring cost of capital is a key component in the valuation and corporate decision making processes. However, this measurement seems to be one of the most difficult elements of business estimations. Therefore, the second lead article in this issue is on "Concept and Measurement of Cost of Capital" by Dr.Hitesh J. Shukla, Associate Professor, Dept. of Business Management, Saurashtra University, Rajkot.

This issue also brings to you a host of interesting articles on contemporary topics like Service quality, Booze and business, Blue-collar work-force, Brand emotion and others. I am sure you will enjoy reading them.

Dr.G.P.C.NAYAR
Chairman, SCMS Group of Educational Institutions

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Editorial

Business and management: Subject and predicate

Subject and *predicate* form an inseparable pair of words in grammar, a rare combination. Both are complementary terms. Their relation to each other helps us to closely and deeply know business and management, both individually and in combination.

As business is related to management, so is subject related to predicate. Business and subject have common characteristics, and management and predicate have also common characteristics. As *predicate* makes a statement about the subject so *subject* gets life. In grammar, the relation is noted as "swim" in "Fish swim." and "is an artist" in "She is an artist."

Subject "denotes the thing you are talking about or considering in a conversation, discussion, book, film etc." Business denotes the part through the predicate of business, management. Predicate is the "part of a sentence that makes a statement about the subject." Management makes a statement of what happens in business. Management is the *action* part of business. In the sentence "Fish swim," "swim" suggests what the subject performs. Similarly how business performs is known through the performance of business. Business is understood only through management of the business. This shows that the knowledge of subject is mandatory to predicate. Consequently, the knowledge of business is absolutely essential to management.

Business is a general concept. The concept of business generates many meanings, common and, sometimes, meaningless. Without knowing the true appropriate semantic suggestion of its being, people use it. Many such meanings formed are due to a state of misology - hatred of reason, hatred of argument, and hatred of enlightenment - on the part of the users. In this context, propriety demands a clear understanding of business, lifting the veil of misology.

We have long been aware of what we mean by business**.** We, who used it to think we understood it, have now become perplexed as we really try to probe its ontological position. So it is fitting that we should raise anew the question of knowing the nature/being of business. We nowadays even get perplexed in our inability to understand the expression of being. Our primary aim in business and management research shall be to work out the question of the being of business and to do so concretely. This will lead to the research on the question of the being of management also.

In mythology or in science, universe was initially sans life/spirit. The Prime mover gave it life. The prime-mover was the life-giver. The life-giver was god. Business gets life, as universe gets life. The prime mover wanted to preserve it and destroy it if necessary. So is the business as established by its prime-mover wanted to preserve it and, if necessary, destroy it, and this necessitated management. Here too, unless we know the nature/being of universe, we cannot think of managing it.

An ontological research anyhow is absolutely essential in the case of business, and also in the case of management to understand their real nature/being. The ontological research will naturally set the stage for b-learning in its right perspective followed by management learning also in its proper direction.

Dr.D.Radhakrishnan Nair

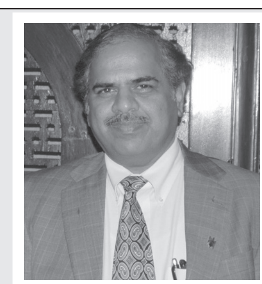
Editorial Assistant: Mr.E.V.Johnson **Assistant Editor: Dr.Susan Chirayath**

Structural Transformation: Economic Growth in India

Meg Hendricks and Kishore G.Kulkarni

Indian economy has recently shown tremendous growth, second only to China's massive gain. The economic growth should have created a large increase in employment of labour in India, but unfortunately, the decline in unemployment is less than impressive. India's recent economic growth has been led by the service sector, such as Information Technology which creates fewer jobs and higher productivity. Contrary to the traditional movement of labour, in such models as Lewis' Structural Adjustment Model, from the agricultural sector to manufacturing to services, Indian economic growth has been unconventional. The first section of the paper reviews available literature. In the second section, the Lewis Model is applied to the India's economic growth and the third section considers some policy issues.

Economic develpment theories are typically structural, Marxist, or neo-classical in nature; each of which presents a slightly different perspective and recommendations for the most effective methods a society can apply to achieve economic development. The study of theory is important; however, it is critical that we understand how to apply the theory and test its validity. This paper examines Arthur Lewis' Structural Change model and its applicability to the country of India.



Ms.Meg Hendricks, Department of Global Finance, Trade and Economic Integration, University of Denver, 2199 S. University Blvd., Denver, CO 80208, Email: hendricks.meg@gmail.com

Dr.Kishore G.Kulkarni, Professor of Economics and Editor - Indian Journal of Economics and Business, CB 77, P.O.Box 173362, Metropolitan State College of Denver, Denver, CO 80217-3362, Email: kukarnk@mscd.edu

The Structural Change model by Arthur Lewis provides an explanation of how developing economies move through various stages of development by implementing a balanced growth strategy to help offset the consequences of dualism. The crux of the theory focuses on the efficient allocation of resources, specifically taking surplus labour and transferring it to an industry, which can more efficiently use the labour input and, as a result, boost the total product produced by the economy thereby increasing GDP, employment and the standard of living.

In this paper, the Structural Change Theory is applied to recent Indian economic growth in hopes that some understanding can be gained regarding the country's interesting and impressive development experience. Over the past ten years, India has become the second fastest growing economy in Asia, just behind China, with both remarkable and consistent increases in its Gross Domestic Product. It is evident that India is becoming an increasingly important part of the global economy such that when a citizen of a developed economy calls for technical support on many top brands of computers, he or she is likely to speak to someone in India. This growth is primarily due to software development and the services industry, which suggests that there has been a transfer of labour from the country's agricultural sector to the service and software sectors. While Lewis' model directly focuses on labour transfer from agriculture to industry, at first glance it appears that India has not dedicated factors of production to support the growth and development of its industrial sector thereby indicating that the Structural Growth model does not fit the dynamics of change in India. It is true that India does not have a large industrial sector; however if Lewis' model is used as a general application of resource allocation and efficiency, it could be argued that the 14 percent drop in agricultural labour has reinvested itself into the services sector via more attractive wages and higher productivity. Therefore, it is fair to consider the Structural Change theory as one that accurately describes the growth phenomenon currently occurring in India, the new lesson however is that structural change can occur by reallocating labour from agriculture to services rather than to the industrial sector as Lewis suggested.

The structure of the paper is separated into two sections. Section one provides an examination of Arthur Lewis' Structural Growth model including strengths and weaknesses of the theory while section two applies the Economic Development Model to the Indian economy.

An Examination of Arthur Lewis' Structural Adjustment Model

The living conditions endured by the majority of people residing in less developed countries are a global concern. Issues such as low levels of income, capital stock, poor educational systems, limited technology, inadequate infrastructure and inequality between service and industrial base income as well as unstable political and economic institutions characterize less developed countries (LDCs).[1] The drive to improve the economic and political conditions in developing economies has emerged as a complex and highly interesting branch of economics, which has been closely studied since the end of World War II. Determining the best economic policies with the goal of providing higher standards of living in less developed countries was of great interest to economists both in the developing and developed world. Numerous theories and extensions have emerged in the past 40 years, some of which are more influential than others.

Although there has been extensive discussion regarding how to measure the development level of a country, the most common tool of analysis remains a country's Gross Domestic Product (GDP). GDP measures the total market value of all the goods and services produced by an economy. It is assumed that a higher GDP indicates a higher standard of living for the country – a supposition that unfortunately can be untrue. For the sake of comparing levels of development, it is generally considered more effective and appropriate to use Per Capita Income (PCI), which considers the size of a country's population when calculating GDP. While the use of this measure more accurately reflects the productivity of a society, PCI does not provide any indication of income equality in a country and therefore still remains ineffective at determining the actual level of development enjoyed by a nation's general population. It has been proven repeatedly that the benefits of economic development are not distributed evenly which is reflected by the huge disparities between the rich and the poor in developing economies. The extreme stratification between the rich and the poor is just one of the many dualistic features of an LDC. In fact, it became evident to economists that all developing economies had numerous conditions, which could be considered dualistic in nature. This realization engaged the curiosity of economists throughout the world in the 1940s and the 1950s.

The concept of dualism is very real in developing countries and indicates an economy in which development occurs unevenly between and within sectors.[2] The disparity between the rich and the poor or the dichotomy between the small industrial sector and the large agrarian, rural sector are just two examples of how dualism exists in LDCs. The traditional or agricultural sector in LDCs is typically responsible for producing the greatest portion of these countries' GDPs, with the industrial sector playing a secondary role. In contrast, the industrial sector in developed economies is dominant and agriculture is but a small contributor to GDP thereby indicating that growth of the industrial sector is positive for development. This distinction and disparity in LDCs between the two sectors precipitated an economic theory referred to as the Structural Growth Theory, proffered by Arthur Lewis in 1954. While dualism is considered to involve opposing forces or extremely different dynamics, structural growth involves creating a development strategy based on balanced growth, which Arthur Lewis' Structural Growth model aims to do by addressing disequilibrium within an economy.[3] The Structuralist approach further attempts to identify specific rigidities and lags in a developing economy that predispose it to ineffective and inefficient resource allocation.[4]

Arthur Lewis recognized that the non-commercial agricultural sector is primarily composed of family-owned farms, which are customarily tended to, by the entire family or group of families who rent the land. Consequently, both the labour required to grow the food grains and the wages received from the farm's outputs are shared by all members of the family. Economically, this labour sharing technique results in a very low marginal productivity because each additional unit of labour fails to increase the productivity of the farm, which results in the driving down of wages to subsistence level. For example, Lewis suggested that if there were eight people working on a farm producing 400 units of food, but only five of them were actually needed to produce the same total product, the additional three labourers were not increasing the production and therefore has a zero marginal product. Because of low labour productivity, wages are at a subsistence level. As a result, Lewis' theory proposes that if those three labourers were redirected or reallocated to work in the industrial sector, the marginal productivity of those individuals would be positive and the labourer's wages would be higher than subsistence level. This improvement in marginal productivity would also contribute to the development of the economy by increasing the country's GDP.

The industrial sector, which is typically underdeveloped in LDCs, would experience an inflow of labour from the agricultural sector, and causing an immediate increase in total product since the industrial sector is characterized by positive labour productivity. As a new, undeveloped sector with positive labour productivity, wages would be higher in the industrial sector, which would encourage labour migration and would increase total product, resulting in higher profits. Lewis assumes that industry owners or "capitalists" reinvest profits into the business by purchasing capital assets or new production technologies. An increase in capital assets and / or an improvement in production technologies enable the capitalists to absorb and utilize additional labour while also increasing the productivity of the current labourers. The total product in industry continues to grow resulting in a balance between the agricultural and industrial sectors while also strengthening the economy's diversification and GDP.

The Structural Growth model is a sensible concept that reallocates resources (labour) to a sector that can more productively use the resource. The objectives of Lewis' Model are threefold: 1.) to commercialize a developing country by adjusting the labour surplus through the reallocation of unproductive labour, 2.) to implement technology in both the agriculture and industrial sectors to support higher productivity, and 3.) to increase privatization to complement government planners.[5] Additionally, Lewis' model has three main assumptions, which mirror its objectives: "technology can be divided between capital using (capitalist) and non-capital using (subsistence), the labour supply is elastic at a conventional wage, and saving is done largely by the recipients of non-wage income (capitalists)."[6] In general, these assumptions help to simplify real life conditions and have stood the test of time. Lewis' theory both recognizes that countries develop slowly and in stages but also provides a guide for how to develop – both of which have proven to be significant contributions to the school of development economics.[7]

Lewis assumes that the labour supply is elastic meaning that the labour supply is sensitive to changes in demand and wage rates. In order for labour to migrate from the rural, agrarian parts of the country to urban and industrial jobs, some degree of wage increase must exist in order to attract the surplus labour. "A substantial unskilled labour wage gap is indeed likely to be required, partly to induce the typical agricultural worker to overcome her attachment to soil and family, partly to meet transport costs, and partly as a consequence of such institutional factors as commercialized sector minimum wage legislation, unionization, public sector wage setting, etc., each of which usually does not extend into non-commercialized activities. Once these two wage levels are given within a general equilibrium context, the release of labour by the non-commercialized sector and its absorption by the commercialized sector represents an essential ingredient of balanced growth in the labour surplus economy."[8]

Arthur Lewis' contribution to development economics has received extensive attention, which has uncovered both lines of attack as well as arenas, which have provided further support and credibility for his theory; however, labour surplus has by far been the most debated topic of Lewis' model. Gustav Ranis contributed a strong assessment of Lewis' contributions to development economics in two papers titled "Arthur Lewis' Contributions to Development Thinking and Policy"[9] and "Labour Surplus Economies."[10] He specifically discusses the concept of labour surplus, which has been attacked and repudiated by many economists, specifically the assumption that labour surplus can be removed and there will be no change in output by the agricultural sector. Ranis reports that Theodore Schultz cites that when a large percentage of the agricultural work force contracted influenza, there was a substantial decrease in agricultural output thereby discrediting the assumption of zero marginal productivity. Amartya Sen (1967) negated Schultz claim by suggesting that in some instances there may be a change in agricultural output, but the labourers who remain in the agricultural sector may need to put in more hours and work harder than they did when the labour surplus existed to achieve equal total product output. It is clear that Lewis thought of labour surplus in terms of the number of human beings that could be reallocated to another more productive sector rather than the total work hours required producing a set amount. Ranis suggests that a more accurate assessment of the labour surplus debate is that if there is a large withdrawal of labour from a sector, there must be a "reorganization of production by those left behind, i.e., technology change."[11]

Other weaknesses of Lewis' theory include his failure to address the development problems associated with mass migration to urban areas, which typically play host to most of the industrial sector.[12] Cities or large urban areas are associated with such challenges and problems as providing sufficient education for the population, poor infrastructure and sanitation, which can lead to increased disease, as well as heightened levels of crime, and a lack of housing. The notion that labour can continue to infiltrate the urban areas with no negative consequences has proven to be unrealistic. A third weakness found in Lewis' assumption is that wages in the industrial sector will remain higher than those in the agricultural sector; in fact if the inter-sectoral terms of trade shift in favour of agriculture, wages will increase in the agrarian sector and attract labour away from the industrial sector.

Technology provides the means to increase productivity with the same or even less labour resulting in greater efficiency and higher total product. The application of technology in the agriculture and industrial sectors is typically skewed in most developing countries. If the country has access to purchase and can afford new technologies of production, the industrial or manufacturing sectors are typically more prepared to reinvest profits to increase efficiency. The use of technology or improved technologies of production in the industrial sector is considered a given in Lewis' Structural Adjustment model.

Broadly speaking, Lewis' model provides a strategy for developing economies to pursue slow economic growth by reallocating surplus labour in the inefficient sector with low marginal productivity to the sector that promises both higher wages and an ability to grow through the application and implementation of new technologies of production. "While Lewis' theory clearly has its weaknesses, his notion of dualism, especially that focused on the labour market dimension, rural and urban, continues to offer a theoretically valid, empirically relevant and practically useful framework for dealing with some fundamental real world issues of development."[13]

In this paper, however, we argue that the dualism in economic development can be realized when labour is reallocated from agriculture to services in which marginal productivity can be even higher than in the industrial sector. Hence, economic development can result from the attractive force of the services sector as witnessed in the case of India. Thus, when the services sector improves faster than the industrial sector, it offers higher pay-off to the labour, and economic growth occurs but by slightly different means than is suggested by Lewis' model. One of the other major problems of Lewis's model is the assumption (and therefore argument) that growth necessarily occurs in manufacturing or industrial sector alone, which ignores potential growth in the agricultural sector.

Applicability of the Structural Growth Model in India

India is currently considered one of the fastest growing economies in the world, which is impressive in its own right, but given that, India is still considered a developing economy; its growth is even more remarkable. The country is 1,269,338 square miles and is made up of 28 states. The capital city is New Delhi, located in the northern part of the country and is home to the national government. The official languages are English and Hindi, but there are 22 other scheduled languages plus an additional 415 living languages. The currency is the Indian Rupee (INR) and is currently valued at 45 INR per US dollar. The country's GDP is approximately $1000 billion in 2006 and its Per Capita Income (PCI) for 2006 was approximately $950. In 2006 India was the second most rapidly developing country in the world; however, the country is still ranked in the bottom half of the United Nations Development Report (126 out of 177 countries). This highlights the continued dualistic nature of the country's economy. India's population is 1.1 billion, 20 percent of which have secondary and post secondary education, 40 percent are semi-literate and 40 percent are illiterate.[14]

India, like every society, began with agriculture as the predominant contributor to its GDP, but opportunities for industrialization came in 1854 when India joined the industrial revolution with the use of the cotton and jute mill in Calcutta.[15] During that time agriculture remained the top producer, but industry and mines counted for seven percent of the national income. With the slowing of the world economy during World War I, the Great Depression and World War II, India's economy stagnated along with the development of its industrial sector. In 1947, India gained its independence from the United Kingdom and worked to implement economic growth policies. India's growth however began very slowly in the mid -1950s due to high levels of protectionism and an increase in public investment.[16] Few years of the 1960s were encouraging. The interest and commitment to develop of India's industrial sector was marked by the Industrial Policy Resolution in 1948 resulting in an industrial production annual growth rate of seven percent which lasted until 1965; a remarkable growth rate even by developed economies' standards. However, after 1965 and until the mid 1980s, the Indian economy began to slow with little to no growth, and there was essentially no shift in labour allocation during this time. Even though India had a high savings rates, costly capital assets hindered investment into the industrial sector. During this time, India was not considered an exceptional model of growth, but that reputation would soon change.

Increased foreign aid and investment as well as a large surplus of domestic savings provided the impetus for India's second growth surge that began in the mid 1980s.[17] By 1991, India was ready for more profound economic adjustments, which now proves to have been a critical year for India. The minority government implemented a series of market liberalization policies beginning in 1991, which continued throughout the decade. The main economic reforms implemented included:

Increase in number of sectors open to private investment, including power, steel, oil refining and exploration, road construction, air transport, telecommunications, ports, mining, pharmaceuticals and the financial sector. Sectors such as garments and textiles were deregulated as well,

Policymakers encouraged foreign direct investment (FDI) and reduced bureaucratic processes,

Deregulation of production quotas to increase competition,

Liberalization of trade policies. Simplification of tariff system, Conversion of quotas to tariff and reduction of overall rates imposed.

Deregulation of state controls on business decision-making and closing of loss-making state enterprises.[18]

The response to the reforms was overwhelmingly positive and has resulted in a significant increase in India's GDP as well as a swell in both the wealthy and middle class sections of society. "In July 1991…with the announcement of sweeping liberalization by the minority government of P.V.Narasimha Rao the country opened the economy, dismantled import controls, lowered customs duties, and devalued the currency and virtually abolished licensing controls on private investment, dropped tax rates, and broke public sector monopolies… [W]e felt as though our second independence had arrived: we were going to be free from a rapacious and domineering state."[19]

While economic growth was definitely happening with growth in each sector, the industrial sector was not exploding in the manner that Lewis' model would predict. Industrialization began in India in 1854, but it soon became clear that the country did not hold a comparative advantage in this sector.[20] The price of capital goods was so high that increases in capital stock were very slow, resulting in an industry sector that had limited capital assets for growth. [21] Consequently, capital accumulation in India is not impressive which hampers the country's ability to be competitive.[22] Additionally, stagnation in the industrial sector is due to an exhaustion of the industrial sector's ability to provide import substitutions as well as low investment.[23] As of 2005, the industrial sector provided approximately 27.1 percent of the country's GDP and predominately consisted of sales in telecom, cement, automobiles, tobacco, beverages, metals and alloys, manufacturing and equipment, textiles, wood and wood products.[24] A very promising and fast-growing industry is that of telecom which grew by 34 percent in 2005.[25]

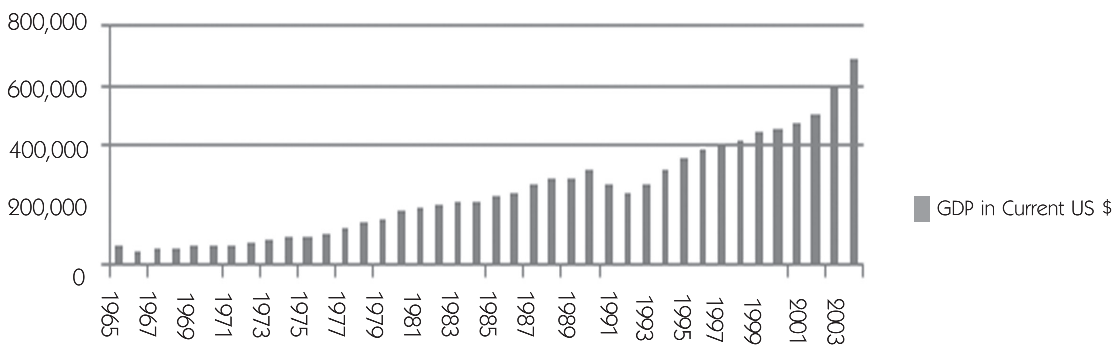
Both a barrier to growth as well as a potential industry for significant growth is that of infrastructure.[26] As a developing economy, India's infrastructure is very limited and is in desperate need of rebuilding and reorganization. The cement industry stands to gain significantly if the administrative bottlenecks can be resolved to provide public investments in new roads and transportation options, such as trains or light rails.[27] In addition to these structural limitations, there are still some other bottlenecks to economic growth such as high levels of bureaucracy, corruption, a lethargic legal system, and crude and outdated labour laws. The private sector incentives are still not to the point where manufacturing can grow at a rapid speed. Increase in software and other services were relatively new developments, consequently, the regulatory net was not prepared to slow growth in the services sector. For these reasons the modern Indian economic growth is dominated by service more than manufacturing sector.

The rural areas of India are home to approximately 2/3 of the population, the vast majority of which are also employed in the agricultural industry.[28] As of 2004, 57.8 percent of the population was working in the agricultural sector[29], which indicates that since 1951 there has been a 14 percent decrease in the amount of labour involved in the sector. Currently no technology is used in the informal or non-commercialized agricultural sector, which has hindered any significant growth possible in food grains.[30] With such a large percent of the population still living in rural areas, it is critical for India to increase its agricultural productivity for the sake of long-term stability and growth.[31] However, it is unlikely that the agricultural sector will be able to absorb additional labour[32] because of "inadequate irrigation facilities, fragmented land holdings, low technology application, increasing input costs, and high levels of debts incurred by farmers and money owed to rural money lenders."[33] The federal and state governments give agricultural subsidies to support the sector; however, the majority of aid is "given to wealthy farmers and results in an increase in the price of food which further stratifies wealth within the country"[34] and contributes to economic dualism. The limited opportunities to earn a living wage in the agricultural sector suggest that the Indian government must strategize some job opportunities for those displaced agricultural workers with limited education.

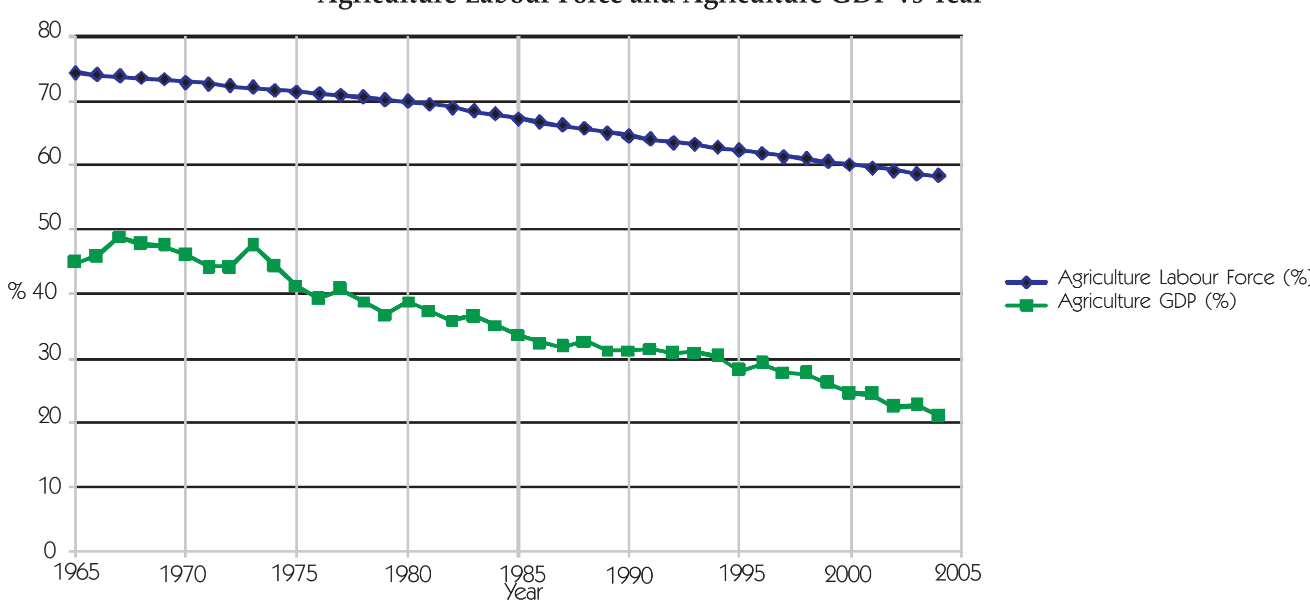
During the 1960s-1970s when industry became a focus of the government specifically with the publication of the Industrial Policy Resolution in 1948, food grains actually became more valuable leading terms of trade to shift in favour of agriculture.[35] This resulted in a wage increase in the agricultural sector in comparison to industry, which ultimately contributed to the stagnation of the industrial sector as a whole. [36]

An examination of India's economic situation, specifically the trend of its GDP, the percent of the labour force employed in the agricultural sector, the percent of GDP contributed by agriculture, manufacturing, industry and services provide both a yearly and a trend analysis for sector strength and growth. These categories allow us to examine the actual data and determine if India's economic growth can be attributed to the Structural Growth Theory.

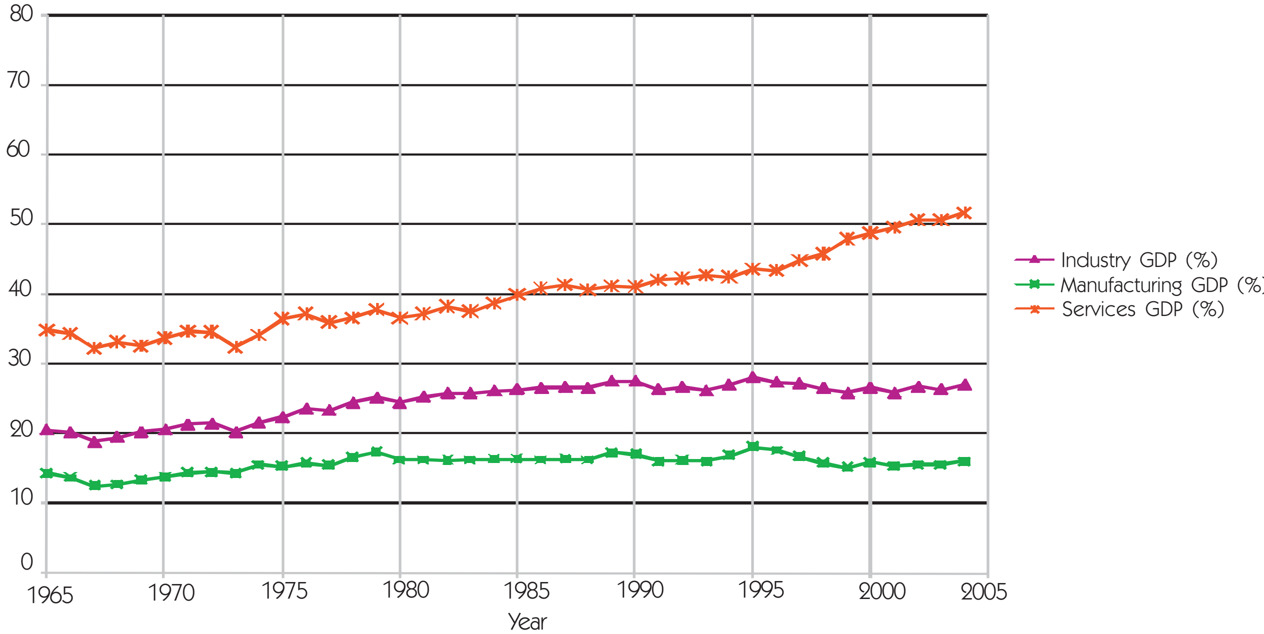
India's GDP in Current US$



Agriculture Labour Force and Agriculture GDP vs Year



Industry, Manufacturing, and Services GDP vs Year



The data indicates that since 1965, India's GDP has grown steadily but has made significant jumps in the past 10 years. A bit more telling is the second graph, which plots percent of labour force employed in the agricultural sector against percent of GDP contributed by the agricultural sector. It is clear that the labour force involved in the agricultural industry has decreased over time which is directly associated with a similar decrease in the percent of GDP contributed by the agricultural sector. The decreased labour in the agricultural industry has been transferred, but graph 3 indicates that both the manufacturing and industrial sectors have stayed flat over the past 40 years, while the service sector has grown by approximately 20 percent. The transfer of labour between the agricultural and services sector exemplifies Arthur Lewis' notion of labour resource allocation.

The service sector in India is the hottest growing sector in the economy as well as the highest contributor to GDP at approximately 52 percent in 2005. According to Arthur Lewis' model, labour has transitioned from the agricultural sector to the industrial sector; however "Labour has moved from agriculture to services without making a stopover in manufacturing, as is common elsewhere. This seems to be the result of the farsighted decision made by India's government in the early years following independence in 1947 to build up a number of high quality institutes of technology to this day remain among the world's best.[37] While the decision to invest in high level technology institutions did not provide the industrial boom that Lewis encouraged, India's success has not been based on manufacturing, but on the expansion of the service sector. Consequently, since it has been displayed that India has a comparative advantage in services and does not have a comparative advantage in industry or manufacturing, Arthur Lewis would argue that the remaining zero marginal productivity farmers should switch to the service sector. While this appears to be a logical solution, the services sector is unable to generate sufficient employment or incentives for education to absorb a labour surplus.[38] Furthermore, the service sector is considered more sensitive to business fluctuations in core economies, such that if the United States or Europe experiences a depression, the service sector in India is likely to be severely and adversely affected.[39] These two characteristics of the service sector have concentrated the jobs and the wealth in about 20 percent of the population; also the hands of the individuals with secondary and post secondary education. [40]

Labour in India and Lewis' assumptions regarding the reallocation of surplus labour is diverted by certain cultural, geographical and regulatory dynamics. The fact that 57 percent of the population remains in rural and agrarian areas of the country suggest that the movement of labour is not occurring to the extent that it could. "The anemic response of cross-state migration to income differentials in India is most likely due to a combination of barriers to the mobility of labour: strong local workers' unions, which act to keep out competing potential employees; rigidities in nominal wages; lack of housing in fast-growing urban areas; and, most important, social, cultural and linguistic barriers to the cross-regional substitutability of labour." [41] Additionally, if the transaction costs of moving away from agriculture are so high, there is little incentive to invest in education. [42]

Certain elements of the Indian society have contributed to the existence of surplus labour and low marginal productivity. The labour unions in India are very influential and the surplus labour in manufacturing is due to companies' fear of union unrest and potential backlash. Consequently, firms employ more people than required to be profitable in order to maintain positive relationships with unions. In some states, the culture is to "shirk" on the job such that productivity is low and more employees are needed. [43] Additionally, low unemployment is an economic priority in India and consequently both the private and public sectors are under pressure from the government to avoid retrenchment of workers. [44] However, that being the case, India's growth rate of output per worker is close to world average. [45]

Due to India's very rigid and stubborn labour laws, which are unlikely to change under the current government coalition,"[46] coupled with a population of over 1 billion, full employment is an economic dream for many. [47] "Employment creation is perhaps the most troubling economic and political challenge facing the country. The government has put the issue at the top of its priority list: its employment guarantee scheme has been its main contribution to alleviate the problem so far. The policy prescription for unemployment is to increase the manufacturing sector and to create new jobs in unregistered businesses.[48] In terms of the Structural Growth model, the growth of the labour supply in India makes Lewis' notion of "labour surplus" even more potent.[49]

Even though India has skipped over the development of its industrial sector and moved straight to creating a well-respected services sector, India is on its way to becoming a more developed economy. It is clear that this growth can be attributed to reallocation of labour. In order to avoid further stratification of wealth it would be ideal to have a manufacturing industry in India, like there is in China, to provide employment to the 80 percent of semi-literate or illiterate population.[50] It is standard practice to compare the two fastest growing economies in Asia, and because of India's lack of industry, the country continues to come in behind China in its potential for future growth. "The main difference in the growth performance of China and India is not the strength of India's service sector, but the weakness of its manufacturing. Until India boosts its industrial productivity, which will require bolder reforms, it is premature to boast that its economic performance is as good as China's."[51] However, it seems unlikely that India will shift or even share its current focus on growing and strengthening the services sector in order to grow its industry sector, in which it ostensibly does not have a comparative advantage in the region of Asia.

Conclusion

Arthur Lewis' Structural Growth approach is respected because developing economies continue to struggle to absorb their growing labour force and further because of a worsening of distribution of income.[52] While it does seem that most developing countries are slowly transitioning labour from the agricultural sector to the industrial sector, India is taking a different approach by providing excellent employment opportunities to the highly educated population in the service sector. It is also important to note that this development strategy will not distribute the benefits equally, but will concentrate the wealth into the hands of the 20 percent of the population that is literate and educated, thereby increasing economic dualism within the country. India deserves respect for being able to develop a highly advanced industry such as software and services, but the problem of stagnant industrial, manufacturing and agricultural industries leaves much of the population without quality employment opportunities. Although India is managing its development differently than other countries, it is clear that Lewis' model is highly applicable as is demonstrated by the shift in labour away from agriculture to a more productive, lucrative and technologically advanced sector.

Foot Notes

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Concept and Measurement: Cost of Capital

Hitesh J.Shukla

The cost of capital is an integral part of investment and financing decision as it is used to measure the worth of investment proposal. It has received considerable attention from both theorists and practitioners. The concept of cost of capital is useful in determining optimal capital structure, investment evaluation, and financial performance appraisal. It is a difficult decision that involves a complex trade off among several considerations like income, risks, flexibility, control, timing and so on. The rationale of this study is to understand the concept of cost of capital and measuring cost of each component as well overall cost of capital of a business firm. To help one, in understanding the concept better, researcher uses the example of ACC Limited, and analyse cost of capital for a period of six years i.e. 2000-01 to 2005-06. With the help of necessary secondary data, drawn from the annual reports of the firm. The CAPM based cost of equity for ACC was much lower than the estimates according to the dividend growth model. CAPM was theoretically superior to the dividend-growth model. ACC's market value weighted average cost of capital was found higher than the book value weighted average cost of capital.

Cost of capital is a central concept in financial management, viewed as one of the corner stones in the theory of financial management. It has received considerable attention from both theorists and practitioners. Cost of capital from the firm's point of view, is the minimum required rate of return needed to justify the use of capital. It is the rate of return that a firm must pay to the fund suppliers, who have provided the capital. In other word, cost of capital is the weighted average cost of various sources of finance used by the firm. These sources are equity, preference, long-term debts and short-term permanent debt. The concept of cost of capital is useful in determining optimal capital structure, investment evaluation, and financial performance appraisal. (Sudhindra Bhat, 2008) It is an important concept in formulating a firm's capital structure. Capital structure, the part of financial structure that represents long-term sources, is generally defined to include only long term debt and total stockholder investment (Solomon, Ezra, 1963). To quote Bogen (1957) it may consist of single class of stock or several issues may complicate it. The inherent financial stability of an enterprise and risk of insolvency to which it is exposed, primarily depends on the source of its funds as well as the type

Dr.Hitesh J.Shukla, Associate Professor, Department of Business Management, Saurashtra University, Rajkot-360 005, Email: hjshkula@rediffmail.com

of assets it holds and relative magnitude of such assets categories (Leopold 1974). To quote Ezra optimum leverage is the mix of debt and equity that maximizes market value of the firm and minimises the firm's overall cost of capital. As observed by Van Horn (1996), in the optimum capital structure, the marginal real cost of each available financing is the same. To Guthmann and Dougall (1962), the capital structure balances the financing, so as to achieve the lowest average cost of long-term funds. A study of capital structure involves a study of the debt-equity mix with the object of lowering the overall cost of capital and with a view to maximizing the market value of the firm's securities (Weston 1972). The theory of cost of capital is based on certain assumption. A basic assumption of traditional cost of capital analysis is that the firm's business and financial risk are unaffected by the acceptance and financing of projects (Gitam 1997).

The rationale of this study is to understand the concept of cost of capital and measuring cost of each component as well overall cost of capital of a business firm. Understanding and measuring cost of different sources of fund can be studied from different perspectives but to remain focused, the study limits its scope to levered firm through ACC Ltd. for a period of six years starting from 2000-01 to 2005-06, with the help of necessary secondary data, drawn from the annual reports of the entity. Since the research is mostly based on the information collected from the annual reports of the sample unit, the limitations of the data are apprehended to be the limitations of the study. In unison it is believed that such type of limitations, if any, will not affect the validity and reliability of the study to a great extent.

The Sample

ACC is India's foremost manufacturer of cement and concrete. It was incorporated in the year 1936. It came into existence consequent to ten existing cement companies belonging to four prominent business groups - Tatas, Khataus, Killick Nixon and F.E.Dinshaw groups joined under one umbrella in a historic merger. The company has been a trendsetter and important benchmark for the cement industry in respect of its production, marketing and personal management process. The company has 14 cement plants all over India, three refractory plants and 6 Ready Mix Concrete plants near to four metro cities of India. It has also extended its services overseas to the Middle East, Africa and South America, where it has provided technical and managerial consultancy to a variety of consumers, and also helps in the operation and maintenance of cement plants abroad. In September 2006, the company has changed its name from Associated Cement Companies Limited to ACC Limited.

Analysis

A firm may obtain its capital through equity capital in two ways, retention of earnings and issue of additional shares to the public. Cost of equity or the required returns by the shareholders is the same in both the cases, since in both cases; the shareholders are providing funds to the firm to finance their investment proposals. The cost of retained earning involves opportunity cost (Khan and Jain 2007). A firm can raise capital even through debt to get benefits of leverage. Sample firm has raised its capital through equity as

Table 1: Capital Structure – 2006

(mn Rs.)

Source of Capital	BV	BV Weights	MV	MV Weights
Share Capital	187.48	0.0462	16,754.85	0.8123
Reserves	2,955.16	0.7281	2,955.16	0.1433
Total Debt	915.98	0.2257	915.98	0.0444
Total Capital	4,058.62	1.0000	20,625.99	1.0000

Table 2: Financial Indicators

ACC Ltd	EPS (Rs.)	DPS (Rs.)	Dividend (%)	Pay-out (%)	Book Value (Rs.)	Market Value (Rs.)	ROCE (%)	RONW (%)	Div Yield (%)
Dec-06	63.60	15.07	150.00	23.70	167.63	1,085.55	41.28	41.56	1.38
Dec-05	37.79	10.68	106.67	28.26	115.63	534.20	19.08	22.08	1.50
Mar-05	20.19	7.02	70.00	34.76	89.36	360.45	18.46	25.65	1.94
Mar-04	10.78	4.00	40.00	37.08	76.28	254.55	13.86	16.48	1.57
Mar-03	5.75	2.50	25.00	43.42	62.92	138.50	8.46	6.67	1.81
Mar-02	7.63	3.00	30.00	39.29	59.64	153.95	12.56	13.77	1.95
Mar-01	2.57	1.99	20.00	77.59	67.40	129.80	9.73	7.26	1.54

well debt. Table - 1 provides the details of capital structure of ACC during 2006. It leads to the conclusion that the unit has huge reserves and surplus in compare to its paid up capital that shows the internal financial strength of the unit. While looking to the market capitalization, paid up capital has the highest weight due to high market price.

Table 2 provides data on ACC's EPS, DPS, Payout Ratio, Market Value, Book Value, Dividend Yield, ROCE (percent), and RONW (percent) for the years March 2001 to December 2006. All the above variables move in upward direction during the period of the study. Since 2003 all the variables were doubling-up year-to-year it was a positive indication for the investors. The market capitalization (the market value of equity) of ACC in December 2006 was Rs.20,625.99 million. The market value of debt was assumed to be the book value.

Cost of equity can be calculated through dividend growth model (Panda I M 2005). The basic formula for calculation of equity is as;

$$Ke = (DIV_1 / Po) + g$$

Here, term, DIV_1/ Po represents expected dividend yield and g represents expected (constant) growth in dividends. ACC's dividend yield in 2006 was 1.38 percent. The dividend yield of the sample has varied from 1.38 to 1.95 percent with an average yield of 1.67 percent. The researcher assumed that the current dividend yield of 1.38 percent was a fair approximation of ACC's expected yield. To understand the estimation of growth rate, two methods can be used, one, internal growth: Where internal growth is the product of retention ratio and return on equity. It can be calculated as (Panda I M 2005);

$$g = \text{Retention ratio x ROE}$$

This approach may be used when the firm has a stable dividend policy. ACC's pay out ratio has fluctuated over years. However, on an average, it has distributed about 40.58 percent of its net profit and retained 59.42 percent in the past few years. In 2006, it retained about 76.30 percent of its profit. The company's RONW in 2006 is 41.56 percent. Assuming that the current retention ratio of 76.30 percent and RONW will continue in future, then ACC's dividend was expected to grow at 31.71 percent per year.

$$= 76.30 \text{ percent x } 41.56 \text{ percent}$$
$$= 31.71 \text{ percent} = g$$

The constant growth model has its limitations. It cannot be applicable to those companies that have highly unstable dividend policy (or retention ratio) and fluctuating ROE. In practice, to estimate ACC's cost of equity may be relatively more reliable based exclusively on its own data.

Past Average Growth

In practice, growth may be based on past EPS rather than DPS since companies do not change their DPS frequently with changes in EPS. Thus, DPS grows at a slower rate. The average of EPS past growth rates may be used as a proxy, for the future growth. There are two alternatives available for calculating the average (1) the Arithmetic Average and (2) Geometric Average would give a compounded average and is preferable when there is much variability in EPS data. Table 3 provides calculation of the arithmetic average and the geometric average. The EPS growth in 2001 was calculated as; g_1 = (EPS00-EPS01) / EPS00. Growth for other years was calculated similarly. The arithmetic average growth for the period from (2001-06) was founded as follows (Panda I M 2005):

$$\text{Arithmetic average} = \frac{g_1 + g_2 + \ldots\ldots + g_n}{N}$$

The geometric mean is calculated as follows:

$$\text{Geometric mean} = (1 + g_1) \times (1 + g_2) \times \ldots\ldots \times (1 + g_n)^{1/n} - 1$$

Table 3: EPS Growth of ACC

ACC Ltd	EPS (Rs.)	gEPS	1+gEPS
06-Dec	63.60	0.6800	1.68
05-Dec	37.79	0.8717	1.87
05-Mar	20.19	0.8729	1.87
04-Mar	10.78	0.8747	1.87
03-Mar	05.75	-0.2464	0.75
02-Mar	07.63	1.9689	2.97
01-Mar	02.57	1.5700	2.57
AM		1.6880	
Avg. Geometric Mean			1.98

Table 4: Estimate of Growth Rates and Cost of Equity

Method	Growth Rate (%)	Cost of Equity (%)
Arithmetic Avg.	168.80%	170.19%
Geometric Avg.	198.00%	199.39%

Above data makes us clear that EPS of the sample was doubling-up year-to-year. Arithmetic average of growth of EPS for the period was found 1.69 while average geometric mean of the same was found 1.98 for the unit for the period.

For different growth rates of ACC's cost of equity was calculated in Table 4. It varies from 170.19 percent to 199.39 percent for the study period.

Cost of Equity through Capital Asset Pricing Model

CAPM model was developed by William F. Sharpe (1964). It explains the relationship between the required rate of return / the cost of equity capital and the non-diversifiable or relevant risk, of the firm as reflected in its index of non-diversifiable risk that is beta. A more objective alternative model for calculating cost of equity is the CAPM. The use of CAPM requires information like expected risk-free rate of return, expected risk premium and Beta of returns.

Table 5: Return Annually

Year	Return
December 2006	103.21%
December 2005	57.72%
December 2004	27.33%
December 2003	49.50%
December 2002	12.01%
December 2001	-5.48%

Above table provides annual returns of the sample unit for the study period. It varies from –5.48 percent to 103.21 percent. The risk free rate is generally approximated by the highly liquid government security. The yield on 91-day T-bills in India in December 2006 was about six percent. This rate could be used as a proxy of the risk-free rate. The market premium was excess of the expected market return over the expected risk-free rate of return. One could use the historical average over a very long period as a proxy for the market premium. There were no estimates of the market premium available in India. Researcher has used nine percent as the market premium for the calculations. Beta was 1.0353 for the sample unit. Table 5 shows ACC's yearly return on market (Sensex) and ACC's share prices.

ACC's cost of equity = Risk free rate + (Market rate – Risk free rate)

ACC's Beta

= 0.06 + (0.09 x 1.0353)

= 0.1532 # 0.153 or 15.3 percent

The CAPM based cost of equity for ACC (15.3 percent) was much lower than the estimates according to the dividend growth model. CAPM is theoretically superior to the dividend-growth model. One could use 15.3 percent as ACC's cost of equity.

ACC has both short-term and long-term debt in its capital structure. It has also short-term current liabilities that might be carrying some cost. As there was no bifurcation of the interest paid to whom and nothing was specification about the interest to be paid on each debt. So researcher has considered total debt and total interest for the calculation. Thus, researcher has assumed that the interest was paid to all type of debt of the company and the corporate tax was to be assumed at 35 percent. The after-tax weighted cost of ACC's debt would be:

= 0.0821 (1 – 0.35)

= 0.0534

= 5.34 percent approx.

Researcher has estimated ACC's cost of equity and cost of total debt. The cost of equity also includes the reserves and surplus. The composite cost of capital implies an average of the cost of each of the source of funds employed by the firm property, weighted by the proportion they hold in the firm's capital structure. As the weights are being assigned in two different forms i.e. book value of the company and the market value of the company, the weighted average cost of capital will be also calculated on two different weights – book value weights and market value weights, which could be calculated as under:

Table No. 6: Weighted Average Cost of Capital (Book Value and Market Value)

Source of Capital	Cost of Capital	BV W	MV W	WACC BV	WACC MV
Equity	0.1532	0.7743	0.9556	0.1186	0.1464
Debt	0.0534	0.2257	0.0444	0.0121	0.0024
Total		1.0000	1.0000	0.1307	0.1488
				13.07%	14.88%

Above table makes clear that the weighted average cost of capital was approximately 13.07 percent at the book value weight and 14.88 percent at the market value weights. Its market value weighted average cost of capital was higher than the book value weighted average cost of capital.

Table No.7: Interest Coverage Ratio and Interest to Sales Ratio

Year	Net Sales	Interest	Interest to Sales Ratio	Interest Cover Ratio
200612	5660.34	75.19	1.33	20.21
200512	3160.18	66.19	2.09	6.92
200503	3887.40	96.32	2.48	5.61
200403	3274.61	112.17	3.43	3.26
200303	2853.56	134.29	4.71	1.59
200203	2827.91	146.71	5.19	2.28
200103	2576.37	170.18	6.61	1.52

Above table shows the two different financial aspects interest to sales ratio and interest coverage ratio. The interest to sales ratio was highest in the year 2001 at 6.61 whereas it was declining year after year to 1.33 for the year 2006 that show the decrease in interest paid by the company or in other words increases in sales of the company. On the other side, the interest coverage ratio of the company was showing volatile trend over the years but it has shown much higher growth in last year to 20.21 highest of all in comparison to 1.52 in the year 2001.

Conclusion

Financing decision is a difficult decision that involves a complex trade off among several considerations like income, risk, flexibility, control, timing and so on. Considering the objective of maximising market value, the empirical evidence from the above study suggests that debt financing enhance value. One should remember that the cost of equity is also impacted by the debt equity ratio. Typically equity investors demand a significantly higher return where leverage is higher. Hence the impact of using a higher leverage in the WACC many not be as pronounced as what the relative difference in cost of debt and cost of equity may imply. While examine risk for Investor, a distinction is made between systemic risk and unsystematic risk. The CAPM based cost of equity for ACC was much lower than the estimates according to the dividend growth model. CAPM is theoretically superior to the dividend-growth model. ACC's market value weighted average cost of capital was found higher than the book value weighted average cost of capital.

Keywords

Non-Diversified risk, Risk-free return, Market premium, Interest coverage.

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Service Quality: Food Retail

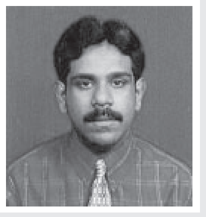
Ravichandran K., David Sam Jayakumar and Abdus Samad K.

The structure of a India's retail sector has an enormous influence on marketing strategy and marketing activities of retail corporate. Though, various types of retail formats exist in our country, food retailing plays a vital role. In this current scenario the attention of the researchers and academicians has been diverted into scrutinizing the organised food retailing business. This is possible through the quality of services provided by the food retailers to each and every individual in the society. The quality of services provided by food retailers can be assessed by the pioneering work done by the experts in retail marketing. This paper will identify the critical quality dimension of Chennai City food and grocery shoppers based on the Retail Service Quality Scale proposed by Dabholkar A. et al, (1996) that takes into account the retail setting. It investigates the service quality items under five different factors and the results have been indicated in this research publication.

Organised food retailing is a relatively new phenomenon in India, with small Western-style supermarkets starting to appear only since the 1980s. Most food is still sold through local wet market vendors, roadside pushcart sellers or tiny kirana (grocery) stores. Although less than one percent of food is estimated to be sold through supermarkets, this share is growing rapidly.

Most supermarkets resemble the small independent operations that existed in Australian cities and towns about 20 years ago, typically occupying 275-750 square meters and carrying about 6000 stock-keeping units.





Dr. K. Ravichandran, Professor, Department of Management Studies, Madurai Kamaraj University, Madurai - 625 021, Email: ravimba_mku@yahoo.co.in

Dr.G.S. David Sam Jayakumar, Lecturer, Department of Business Administration, Jamal Mohamed College (Autonomous), Trichy – 620 020, Email: gsdsjk77@yahoo.co.in

Mr. K. Abdus Samad, Lecturer, Jamal Institute of Management, Jamal Mohamed College, Trichy – 620 020, Email: samad_74a@yahoo.com

Most of the supermarket developments have occurred in the south of the country in the major cities of Bangalore, Chennai and Hyderabad, as well as New Delhi and Mumbai in the north.

According to the Images-KSA Technopak India Retail Report 2005, an estimated 500 shopping malls are expected to be built by 2010 from a near-zero base in 2000, in a trend that can benefit Australian producers by providing greater visibility and shelf space.

Convenience stores are also taking off in major cities, usually in the form of Shell shops or Food Stops attached to petrol station outlets. The format and product range is surprisingly similar to those in Australia, and they often include chilled and refrigerated sections.

Market analysts estimate that the organised retail sector has been growing by nearly 30 percent year since 2000 with similar growth likely in the short-to-medium term.

The sector is expected to undergo further change with prospective new domestic and global foreign entrants, and the takeover or exit of some existing participants. Global players such as Wal-Mart (US) and Carrefour (France) have indicated their plans to enter India once Indian foreign investment regulations permit.

Food Retailing in India

Traditional local markets and small-scale retailing continue to dominate India's food retail sector. There are an estimated 12 million retail outlets, of which almost seven million sell food and grocery products. The vast majority of these are small kiosks (17 percent), general provision stores (14 percent) and grocery stores (called kirana; 56 percent of all rural retail outlets) run by a single trader and his family.

With more than 71 percent of the population living in small villages and engaged in agriculture, most of India still does its food shopping at small-scale vendors in the local village, or at larger-scale weekly markets often serving several villages in one area, where small individual vendors trade.

In the towns and cities, most consumers do their food shopping at the local neighborhood independent small retailers, kiosks and street hawkers. Servants in high income households usually undertake this task.

Most cities and towns also have one (or more) large central fresh produce market where wholesalers and retailers (plus some consumers) procure their supplies for the day from individual traders.

The Food Corporation of India (FCI) has an extensive nationwide network of about 478,000 fair price shops and sells subsidised food grains and certain other staples, but since the retargeting of the Public Distribution System (PDS) in 1997 to focus on the poor, these are only available for those below the poverty line set by the government.

There are also a few other chains of government-operated provisions stores, such as the Kendriya Bhandar (about 120 stores nationwide) run by the Ministry of Personnel. Grievances and Pensions and the canteen stores (about 34 plus 3400 canteens) run by the Ministry of Defense, which are exclusively for Defense personnel.

Thus the majority of food and beverage retailing in India is categorised as belonging to the unorganised sector.

There is no firm data for the total value of India's annual food and beverage expenditure; however there are various calculations and estimates, such as about US$90 billion by 2000 based on the Indian government's estimates of average urban and rural household expenditure on food and beverages, and about US$135 billion by 2004 and growing at 4-5 percent a year, based on industry estimates cited by the USDA.

However it is commonly believed that less than one percent of food and beverage retail sales take place through the organised retail sector, though this share is estimated to be growing rapidly. An early form of 'supermarket' has been around in India for some time' the single-unit, smaller family-owned grocery and provisions store, now calling itself a supermarket (while others may call it a 'super-kirana'), of which there are at least 5 to 20 in each city.

Another form is a specific food and grocery section contained in some department stores, such as the Sahkari Bhandar department store chain, which has about 16 acres in Mumbai. However, it is only in the past decade or so that a form of supermarket akin to a Western-style supermarket, albeit on a smaller scale, has started to appear in India, mainly in certain cities of southern India plus in New Delhi and Mumbai

One of the pioneer supermarket chains was created in 1995 through a technical agreement (and from 1999 by a 51/49 joint venture) between India's Calcutta-based RPG Group and the UK's Jardine Matheson Group's Hong Kong-based subsidiary Dairy Farm International. The joint venture converted the loss-making old Spencer department store chain owned by the RPG Group into the FoodWorld supermarket chain, with about 94 stores in several southern cities, including Chennai, Bangalore, Hyderabad and Pune, by 2005.

While Dairy Farm aims to continue expanding the Food world chain, the RPG Group decided in 2005 to sell its 51 percent share in the FoodWorld joint venture, though possibly retaining half the supermarkets rebranded as Spencer's. RPG Group plans to focus on developing its other retail business including the Spencer hypermarket chain, which had three stores opened by 2005 (in Hyderabad, Visakhapatnam and Mumbai) and a plan for 20 stores across India by 2007 in existing cities others such as Chennai, Bangalore, Delhi, Calcutta, Ahmedabad, and Chandigarh.

Several other Indian-owned companies have developed chains of supermarkets, hypermarkets or convenience stores, mostly in major cities in the southern states plus in Mumbai and Hyderabad.

Another pioneer, the Nilgiris supermarket chain opened its first supermarket in Bangalore in 1971 and by 2005 had built a network of 30 stores, both company-owned and franchised in the states of Tamil Nadu, Andhra Pradesh, Maharashtra and Karnataka.

The Hyderabad based Trinethra Group opened its first supermarket in 1986 and expanded to 68 stores by 2004. It then acquired the 12-store Fabmall chain in Bangalore. In partnership with new 50 percent equity investor, Bangalore-based GW Capital, to enable further expansion into other states, Fabmall now has a total of 28 stores in Bangalore and Chennai.

Other significant chains include the Subhiksha discount supermarket chain, with 72 stores in TamilNadu. Pantaloon Future Group has 42 Food Bazaar supermarkets and Big Bazaar hypermarkets in major metropolitan centres.

The Indian government has taken a cautious approach to allowing Foreign Direct Investment (FDI) in food retailing (and retailing generally), with majority of foreign ownership in food retail chains not allowed, and approvals generally given on a case-by-case basis. (In February 2006 the government made a small concession on FDI in retailing by announcing that up to 51 percent in retailing of "angle brand" products would be allowed).

Since the joint venture of the RPG Group and Dairy Farm International was approved in 1999, only Germany's Metro AG of Germany (with two Metro Cash and Carry wholesale stores opened in Bangalore so far since 2002), and the South Africa-owned Shoprite Group in partnership with a local investor (with one Shoprite hypermarket opened in Mumbai in late 2004) have been permitted to set up operations.

Local foodservice group Radhakrishna Foodland has a license for food wholesaling in partnership with France's Intermarche Group, whereby independent food retailers can sign up for using the Spar store brand.

Several major multinational corporations, in particular Wal-Mart, have been lobbying the Indian government to allow majority foreign ownership in retailing. Wal-Mart has indicated that it would significantly increase its sourcing from Indian suppliers from its current level of US$1.5billion a year (so far mainly non-food products, but likely to soon include some food products, such as basmati rice, team spices, seafood), if it were allowed to set up retailing operations.

Major Indian retail groups, such as the RPG Group and the Pantaloon Group, have expressed their strong opposition to allowing more foreign direct investment into Indian retailing especially majority foreign ownership. They argue that the sector is still at a very early stage of development and multinationals such as Wal-Mart would swamp local players.

However, the Indian government appears to be considering some degree of liberalisation in the interests of improving efficiency in retailing and supply chains and so strengthening the integration of the Indian agrifood market, plus opening possible new avenues for Indian exports via multinational retailers.

Major Players in the Indian Retail Sector

Ownership	Brand Name	Outlet Type	No. of Outlets	Locations	Purchasing Pattern
RPG	Spencer's	Supermarkets Hypermarkets	49 4	Chennai, Bangalore, Kerala, Pune Hydrabad, Mumbai, Vizag, Ghaziabad	Centralised purchasing For each region.
DFI (Joint venture with DSP Merrill Lynch and Rahejas)	Food World	Supermarkets	48	Bangalore and Hydrabad	Centralised purchasing for each region.
Pantaloon	Food Bazaar Big Bazaar	Supermarkets Hypermarkets	42 27	Across all major cities	Centralized purchasing for each region.
Nilgiri's Franchisee Pvt. Ltd.,	Nilgiri's	Supermarkets	30	Chennai, Bangalore, Hyderabad, Pondicherry and tier two towns in Tamilnadu.	Store level purchasing.
The Trinethra Group	Trinethra	Supermarkets	80	Major cities in Andhra Pradesh and TamilNadu	Centralised purchasing for each region
Fabmall India Pvt. Ltd. (Trinethra Group and Fabmall India have formed a joint venture with GW capital).	Fabmall	Supermarkets	28	Bangalore and Chennai	Centralised purchasing for each region
Franchisee ownership model (regulated by cooperative)	Margin Free	Discount stores	600	Major cities in Kerala, Tamilnadu and Karnataka	Store level purchasing.

Food Express India Ltd.	Monday to Sunday Jumbo	Supermarkets Hypermarkets	3 1	Bangalore Bangalore	Centralised Purchasing
Subiksha Trading Services Pvt. Ltd.,	Subiksha	Discount stores	72	TamilNadu	Centralised purchasing
Home stores Pvt. Ltd.,	Sabka Bazaar	Discount stores	25	Delhi and adjoining areas	Centralised purchasing
Pyramid Retail Ltd.,	Trumart	Supermarkets	6	Maharashtra-Mumbai	Centralised purchasing
Trent (Tata Group)	Star India	Hypermarkets Bazaar	2	Ahmedabad, Mumbai	Store level purchasing
Spar – India Ltd A licensing agreement between Spar international and RadhaKrishna FoodLand Pvt Ltd.	Spar	Supermarkets	2	Mumbai	Store level purchasing
Metro AG, Germany	Metro Cash & Carry	Hypermarkets – wholesale operations only	2	Bangalore	Centralised purchasing
Namdharis Group	Nandhari's Fresh	Supermarkets	5	Bangalore	Centralised purchasing
Adani Group	Adanis	Supermarkets	47	Gujarat	Centralised purchasing
Vitan DSI Ltd Company owned and franchisee model	Vitan	Supermarkets	13	Chennai and Bangalore	Store level purchasing

Review of Related Literature

Retailing is the most dominant business in India. Though, various types of retail formats have existed in our country, food retailing plays a vital role. In this current scenario the concentration of the researchers, academicians and retail managers were diverted and expanded into scrutinizing the food retailing business.

This is possible through the quality of services provided by the food retailers to each and every individual in the society. The quality of services provided by food retailers can be assessed by the pioneering work done by the experts in retail marketing.

One among the experts, Parasuraman et al., (1988), published one of the earliest articles to measure the service quality of the retailers. After that the concept of service quality has spread widely over the world and it has attracted researchers and academicians. In this study the service quality of the food retailers was scrutinized and the conclusion reached that, it will lead to understand the service quality of food retailers in our country.

Merrilees, Bill, et al, (March 2007), Retail Development and activity in transition economies is the core theme. The objective of the publication is to come with the Estonian situation in Republic of Estonia. It focuses on retail marketing strategy. Retail service quality, pricing and location, personal services to retain the customer are the major focus of this publication. Tam Jackie L.M., (September 2007). The study examines the relationships among customer satisfaction, service quality and perceived value. This research focuses on the examination of the variables simultaneously and their relationships with post purchase behaviour. Soyoung Kim, et al., (2001). This article gives a structural view regarding the ability of Retail Service Quality Scale to influence the retail shoppers perceptions of service quality in discount stores in the U.S and South Korea. Sirohi, Niren, et al., (Summer 1998), focus on store loyalty intentions of current customers of a food and grocery retailer to understand the effectiveness of activities designed to retain customers. It also examines the quality perception, variables associated with the value for money and competitor attractiveness. The work of Boshoff, Christo, et al., (December 97) is a replication study which gives an overview about SERVQUAL, the quality of customer service in the area of retail in South Africa. This research indicates the five basic dimensions and models of Dabholkar A. et al. (1996). The research of Gounaris, Spiros, et al, (September 2005) investigates the antecedents of perceived service quality in the internet environment for trust in a retail store. It focuses on the reasons for shopping online. The results indicate the perceived e-service quality comprised of four keys dimensions. Fullerton, Gordon, et al., (June 2005), examine the extent to which affective and continuous commitment serve as mediators of brand satisfaction and loyalty intentions relationship. The study of Terblanche, N.S, et al, (December 2004) focuses on the in store shopping experience (ISE) that offers retailers an alternative means of differentiation. It is able to achieve by providing superior store shopping experience. Diverse retailing environments (Super markets vs. apparel retailers) by Trocchia, Philip. J. et al., (2003) evaluate the internet service quality through SERVQUAL. Long, Mary' et al, (2004) give a multidimensional measure on online service quality, based on the consumers comments and their experiences with online retailers. Subhash Mehta C., et al, (2000) explore the usefulness of SERVPERF, the perceptions component of SERVQUAL in measuring the service quality of electronic goods retailers. Subashini Kaul, (October 2005) examines the (RSQS) retail service quality scale developed in U.S. for applicability in Indian retailing. The data was collected from adult shoppers from large formats apparel stores in the city of Bangalore for tracking the overall service quality levels over a period of time. Nor Khalidah Abu, (2004) in his paper produces the service quality dimensions on various sized grocery retailers in Malaysia. This research is based on the RSQS developed by Dabhokar A. et al, (1996). It takes into account the retail setting. Mehmet Arda, (September 2006) highlights the significance of world food retailing and the significant impact of supermarkets and grocery procedures. M.Dhurup in this paper presents the results of a study done on super markets. The paper focuses on the measurement of customer perceptions of super market service quality by using a national super market in South Africa.

Methodology

Data Collection

To measure the service quality of the food retailers, the researchers applied the questionnaire proposed by Dabholkar A. etal, (1996) which is comprised as three different parts. Part 1 elucidates six questions about the personal and demographic background of the respondents. In Part 2, 27 service quality items are raised under the five factors namely Physical Aspects (6), Reliability (5), Personal Interaction (9), Problem Solving (3), and Policy (4). These questions are raised to capture the experience of respondents anchored at Five Point Likert's Scale. Finally in Part 3 six questions highlight the rational background of the respondents. The researchers randomly selected 80 respondents from four food retail stores (Spencers Retail, Subiksha, Nilgiris and Margin Free) and evenly distributed the questionnaire for 20 respondents in each retail outlet.

Reliability and Equivalence of SERVQUAL Items

In order to find out the internal consistency of the 27 service quality items, the measure of Cronbac's Alpha was utilized. The result of the Cronbac's Alpha suggested that the overall reliability co-efficient of the service quality of the experience scale was 95.3 percent respectively. This shows the service quality items were highly reliable (greater than recommended level of 0.6) and achieved internal consistency. Similarly, the researcher also checked the reliability of the service quality under five different factors for the experience scale.

Moreover, Hotelling's, T^2 test was utilized to find difference in the means among the service quality items for the experience scale. The result of the Hotelling's T^2 Test confirms that there is a significant difference among the means of various service quality items for experience scale was statistically at five percent level. This shows the service quality items differed among each other and they conveyed difference in their meanings. Similarly the researchers also checked the Equivalence of Service Quality items under five different factors and the results are as follows:

The following table shows the factor wise reliability of the service quality items:

Factors	No. of Items	Experience
Physical Aspects	6	0.922
Reliability	5	0.813
Personal Interaction	9	0.841
Problem Solving	3	0.622
Policy	4	0.548
Overall	27	0.953

Hotelling's T^2 Test Value

Factors	No. of Items	Experience
Physical Aspects	6	22.649
Reliability	5	10.414**
Personal Interaction	9	34.794*
Problem Solving	3	5.098
Policy	4	10.872**
Overall	28	130.867*

* Significant at 1 percent level ** Significant at 5 percent level

Table 1: Personal and Demographic Profile of Respondents

Factors	Category	No. of Respondents	Per cent
Age	Below 20	2	2.5
	20-30	24	30.0
	30-40	19	23.8
	40-50	18	22.5
	50 and Above	17	21.3
Gender	Male	58	72.5
	Female	22	27.5
Educational Qualification	Doctorate	4	5.0
	PG	33	41.3
	UG	28	35.0
	High school	9	11.3
	Others	6	7.5
Occupation	Govt. official	4	5.0
	Businessmen	11	13.8
	Professional	23	28.8
	Private sector	16	20.0
	Professor	3	3.8
	Entrepreneurs	1	1.3
	Others	22	27.5
Annual Income	Below 1 lakh	50	62.5
	1-2 lakhs	15	18.8
	2-3 lakhs	7	8.8
	3-4 lakhs	3	3.8
	4 and Above	5	6.3
No. of Family Members	2-4	61	76.3
	5-7	16	20.0
	8-10	1	1.3
	10 and Above	2	2.5

(n = 80)

Table 1 visualises the personal and demographic profile of the customers of retail stores. From the total of 80 sample customers, more than 25 percent were in the age between 20 and 30 years and also 72.5 percent of them were males. Moreover, 41.3 percent of the retail shoppers had a post graduate qualification; 28.5 percent were professionals. As far as the incomes of the shoppers were concerned, more than 50 percent of them earn below 1 lakh and 76.3 percent had 2 to 4 members in their family.

Table 2: Rational Profile of Respondents

Factors	Category	No. of Respondents	Percent
Visiting Frequency	1 time	15	18.8
	2 times	15	18.8
	3 times	9	11.3
	More than 3 times	41	51.3
Amount spend for Purchase	Below 1000	44	55.0
	1000-2000	31	38.8
	2000-3000	3	3.8
	3000 and Above	2	2.5
Mode of Information	Relatives	7	8.8
	Neighbours	10	12.5
	Advertisements	17	21.3
	Friends	9	11.3
	All of the Above	37	46.3
Method of Payment	Hot cash	58	72.5
	Credit card	22	27.5
Switching Behaviour	Spencers Retail	32	40.0
	Nilgiris	17	21.3
	Subsikha	18	22.5
	Margin Free	13	16.3

(n = 80)

Table 2 visualises the rational profile of the respondents among the customers of retail stores. From the total of 80 retail shoppers, 18.8 percent of them visit the stores twice or once respectively. Moreover, 55 percent of customers spend below Rs.1000, and 38 percent of them spend between Rs.1000 to 2000. Similarly, 46.3 percent of the retail shoppers say that information about the retail stores was received from relatives, neighbours, advertisements and friends. The method of payment was through cash method (72.5 percent). Finally, most of the retail shoppers nearly (50 percent) will switch to Spencers Retail in the near future.

Table 3: Contribution of Variables of Physical Aspects to the Service Quality of Retail Stores

Dependent Variable: Service Quality Score (Y)

Independent Variable	Unstandardised Coefficient	Standard Error	Standardised Coefficients	t – Value	Significant
Constant	0.703	0.089	-	7.917	0.000
Modern Equipment and Fixtures (X_1)	0.149	0.040	0.206	3.754	0.000
Physical facilities (X_2)	0.065	0.032	0.109	2.019	0.047
Good looking shopping materials(X_3)	0.084	0.044	0.130	1.921	0.059
Attractive and convenient public areas (X_4)	0.138	0.039	0.187	3.539	0.001
Easy Accessibility (X_5)	0.215	0.036	0.289	5.959	0.000
Easy Internal mobility (X_6)	0.157	0.042	0.214	3.713	0.000

Multiple R = 0.960 F-Value = 142.907 d.f (6,73) P-value <0.01 R Square = 0.922

$$\hat{Y} = 0.703+0.149X_1+0.065X_2+0.084X_3+0.138X_4+0.215X_5+0.157X_6$$

Where $\hat{Y}$ is the estimated service quality.

The above equation shows the impact of the variables of physical aspects such as modern equipment and fixtures, physical facilities, aesthetic materials, attractive and convenient public areas, easy accessibility and easy internal mobility on the service quality of retail stores. On an average if the perception score of modern equipment and fixtures changes by 1 unit, there will be 0.149 units increase in the service quality when other variables are kept constant. Moreover, the result of the t-test confirms that the calculated partial regression coefficient such as (0.149), (0.065), (0.138), (0.215) and (0.157) are highly significant at 1 percent level and 5 percent level. Similarly the multiple R of 0.96 shows there exists a relationship of 96 percent between the variables of physical aspects and service quality. The R square of 0.922 exhibits that the variables of physical aspect explained a variation of 92.2 percent in the service quality. Finally, the result of F-test signifies that the explained variation by the above said variables in the SERVQUAL was highly significant at 1 percent level.

From the above analysis it can be concluded that the variables of physical aspect namely easy accessibility, easy internal mobility, modern equipment and fixtures are the dominant variables that increase the service quality of retail stores at present as well as in the future.

Table 4: Contribution of Variables of Reliability to the Service Quality of Retail Stores

Dependent Variable: Service Quality Score (Y)

Independent Variable	Unstandardised Coefficients	Standard Error	Standardised Coefficients	t-Value	Significant
Constant	0.718	0.107	-	6.734	0.000
Promising services(X_1)	0.319	0.039	0.494	8.201	0.000
Time promising services(X_2)	0.163	0.036	0.216	4.574	0.000
Doing it right(X_3)	0.050	0.036	0.073	1.397	0.167
Supply of right products(X_4)	0.083	0.023	0.151	3.539	0.001
Error free transactions(X_5)	0.158	0.040	0.236	3.919	0.000

Multiple R = 0.945 F-Value = 123.644

d.f (5,74) P-value <0.01

R Square = 0.893

$$\hat{y} = 0.718+0.319X_1+0.163X_2+0.050X_3+0.083X_4+0.158X_5$$

Where $\hat{y}$ is the estimated service quality.

The above equation shows the impact of the variables of reliability aspects such as promising services, time promising services, doing it right, supply of right products and error free transactions to the service quality of retail stores. On an average if the perception score of promising services changes by 1 unit, there will be 0.319 units increase in the service quality when other variables are kept constant. Moreover the result of the t-test confirms that the calculated partial regression coefficient such as (0.319), (0.163), (0.050), (0.083) and (0.158) are highly significant at 1 percent level and five percent level. Similarly the multiple R of 0.945 shows there exist, a relationship of 94.5 percent between the variables of physical aspects and service quality. The R square of 0.893 exhibits that the variables of physical aspect explained a variation of 89.3 percent in the service quality. Finally, the result of F-test signifies that the explained variation by the above said variables in the SERVQUAL was highly significant at one percent level.

From the above analysis it has been concluded that the variables of physical aspect namely, supply of right products, error free transactions, promising services and time promising were the dominant variables that increase the service quality of retail stores at present as well as in the future.

Table 5: Contribution of Variables of Personal Interaction to the Service Quality of Retail Stores

Dependent Variable: Service Quality Score (Y)

Independent Variable	Unstandardised Coefficients	Standard Error	Standardised Coefficients	t- Value	Significant
Constant	0.155	0.077	-	2.017	0.048
Employees Knowledge(X_1)	0.078	0.028	0.119	2.747	0.008
Employees confidential Behaviour(X_2)	0.226	0.027	0.340	8.357	0.000
Security in transactions(X_3)	0.111	0.012	0.245	9.612	0.000
Performing prompt services(X_4)	0.089	0.027	0.117	3.307	0.001
Performing exact services(X_5)	0.069	0.022	0.108	3.052	0.003
Immediate response to customer request(X_6)	0.075	0.026	0.113	2.923	0.005
Individual caretaking(X_7)	0.130	0.026	0.170	5.041	0.000
Courteousness of employees(X_8)	0.097	0.024	0.125	3.972	0.000
Courteous communication(X_9)	0.081	0.025	0.112	3.199	0.002

Multiple R = 0.983 F-Value = 223.258 d.f (9,70) P-value <0.01 R Square = 0.966

$$\hat{y} = 0.155+0.078X_1+0.226X_2+0.111X_3+0.089X_4+0.069X_5+0.075X_6 +0.130X_7+0.097X_8+0.081X_9$$

Where $\hat{y}$ is the estimated service quality.

The above equation shows the impact of the variables of personal interaction aspects such as employees' knowledge, employees' confidential behaviour, and security in transactions, performing prompt services and vice versa to the service quality of retail stores. On an average if the perception score of promising services changes by 1 unit, there will be 0.078 units increase in the service quality when other variables are kept constant and vise versa. Moreover the result of the t-test confirms that the calculated partial regression coefficient such as (0.078), (0.226), (0.111), (0.089) and (0.069) are highly significant at 1 percent level and 5 percent level. Similarly the multiple R of 0.983 shows there exists a relationship of 98.3 percent between the variables of physical aspects and service quality. The R square of 0.966 exhibits that the variables of physical aspect explained a variation of 96.6 percent in the service quality. Finally, the result of F-test signifies that the explained variation by the above said variables in the SERVQUAL was highly significant at one percent level.

From the above analysis it is concluded that the variables of personal interaction namely individual caretaking, courteous communication and general courtesy were the dominant variables that increase the service quality of retail stores.

Table 6: Contribution of Variables of Problem Solving to the Service Quality of Retail Stores

Dependent Variable: Service Quality Score(Y)

Independent Variable	Unstandardised Coefficients	Standard Error	Standardised Coefficients	t- Value	Significant
Constant	0.513	0.161	-	3.180	0.002
Returns and exchanges (X_1)	0.465	0.039	0.667	11.800	0.000
Sincerity in problem solving(X_2)	0.154	0.043	0.187	3.582	0.001
Handling customer compliance(X_3)	0.199	0.042	0.263	4.712	0.000

Multiple R = 0.904 F-Value = 113.900 d.f (3,76) P-value <0.01 R Square = 0.818

$$\hat{y} = 0.513+0.465X_1+0.154X_2+0.199X_3$$

Where $\hat{y}$ is the estimated service quality.

The above equation shows the impact of variables like sincerity in problem solving, handling customer complaints, returns and exchanges on the service quality of the retail stores. On an average if the returns and exchanges of promising services change by 1 unit, there will be 0.465 units increase in the service quality when other variables are kept constant. Moreover the result of the t-test confirms that the calculated partial regression coefficient such as (0.465), (0.154) and (0.199) are highly significant at 1 percent level. Similarly the multiple R of 0.904 shows there exists a relationship of 90.4 percent between the variables of physical aspects and service quality. The R square of 0.818 exhibits that the variables of physical aspect explained a variation of 81.8 percent in the service quality. Finally, the result of F-test signifies that the explained variation by the above said variables in the SERVQUAL was highly significant at one percent level.

From the above analysis it has been concluded that the variables of policy to the service quality namely returns and exchanges, sincerity in problem solving and handling customer compliance were the dominant variables that increase the service quality of retail stores.

Table 7: Contribution of Variables of Policy to the Service Quality of Retail Stores

Dependent Variable: Service Quality Score (Y)

Independent Variable	Unstandardised Coefficients	Standard Error	Standardised Coefficients	t- Value	Significant
Constant	0.485	0.154	-	3.147	0.002
Offering Quality products(X_1)	0.177	0.037	0.227	4.820	0.000
Convenient parking facilities(X_2)	0.186	0.046	0.248	4.011	0.000
Convenient operating Hours(X_3)	0.236	0.039	0.377	5.985	0.000
Acceptance of credit cards (X_4)	0.240	0.051	0.341	4.713	0.000

Multiple R = 0.919 F-Value = 101.659 d.f (4,75) P-value <0.01 R Square = 0.844

$\hat{y} = 0.485+0.177X_1+0.186X_2+0.236X_3+0.240X_4$ Where $\hat{y}$ is the estimated service quality.

The above equation shows the impact of the variables of policy to their service quality aspects such as offering quality products, convenient parking facilities, convenient operating hours and acceptance of credit cards on the service quality of retail stores. On an average if the offering quality products changes by 1 unit, there will be 0.177 units increase in the service quality when other variables are kept constant. Moreover the result of the t-test confirms that the calculated partial regression coefficient such as (0.177), (0.186), (0.236) and (0.240) are highly significant at 1 percent level. Similarly the multiple R of 0.919 shows there exists a relationship of 91.9 percent between the variables of physical aspects and service quality. The R square of 0.844 exhibits that the variables of policy explained a variation of 84.4 percent in the service quality. Finally, the result of F-test signifies that the explained variation by the above said variables in the SERVQUAL was highly significant at 1 percent level.

From the above analysis it has been concluded that the variables of policy to the service quality namely offering quality products, convenient parking facilities, convenient operating hours and acceptance of credit cards were the dominant variables that increase the service quality of retail stores.

Table 8: Factor Analysis

Total Variance Explained

Factors	Eigen Value	Percentage of Variance	Cumulative Percentage
1	14.788	54.772	54.772
2	2.573	9.528	64.300
3	1.757	6.506	70.806
4	1.229	4.551	75.357

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.806

Table 8 exhibits the result of factor analysis with principal component analysis of 27 items of retail service quality. From the 27 items, four factors were extracted and this has been confirmed by the Eigen value for the extracted factors were 14.78, 2.573, 1.757 and 1.229 respectively (greater than recommended level of 1). It is worth noted that the first factor explained a variance of 54.77 percent about the original set of items. Moreover, the four factors explained a variance of 75.357 percent about the 27 SERVQUAL items. Finally, the Kaiser-Meyer-Olkin measures of sampling adequacy of 0.806 shows that the variables and the sample size of 80 were viable and feasible to run a factor analysis.

Table 9: Rotated Component Matrix

Service Quality Items	Factor			
	1	2	3	4
Modern Equipment and Fixtures	0.773	0.400	-0.007	0.158
Physical facilities	0.794	0.246	0.146	0.105
Good looking shopping materials	0.708	0.535	0.141	0.135
Attractive and convenient public areas	0.466	0.634	0.320	0.098
Easy Accessibility	0.366	0.539	0.515	0.230

Easy Internal mobility	0.717	0.362	0.282	0.193
promising services	0.759	0.497	0.134	0.128
Time promising services	0.283	0.270	0.702	0.218
Doing it right	0.193	0.826	0.084	0.271
supply of right products	0.190	0.232	0.035	0.891
Error free transactions	0.458	0.666	0.337	-0.033
Employees Knowledge	0.822	0.251	0.144	0.169
Employees confidential Behaviour	0.680	0.563	0.054	0.236
Security in transactions	-0.370	0.049	0.638	0.379
Performing prompt services	0.787	0.224	0.087	-0.060
Performing exact services	0.846	0.103	0.106	0.028
Immediate response to customer request	0.718	0.423	0.030	0.080
Individual caretaking	0.469	0.590	0.343	0.047
Courteousness of employees	0.354	0.385	0.626	-0.035
Courteous communication	0.745	0.052	0.381	-0.009
Returns and exchanges	0.834	0.372	0.153	0.052
Sincerity in problem solving	0.154	0.045	0.856	-0.009
Handling customer compliance	0.201	0.736	0.094	0.226
Offering Quality products	0.106	0.134	0.170	0.838
Convenient parking facilities	0.453	0.514	0.431	-0.227
Convenient operating Hours	0.858	0.157	0.187	0.082
Acceptance of credit cards	0.688	0.508	0.128	0.053

Bartlett's Test of Sphericity - Approx. Chi-Square = 2811.126 d.f = 351 P-Value <0.01

Table 9 shows the result of factor analysis with the extraction technique of principal component analysis as well as the rotated component matrix based on the varimax rotation technique.

It is inferred that the researcher identified that the component loading for retail service quality items was greater than $\pm$ 0.5. The variables such as modern equipment and fixtures physical facilities, attractive shopping materials, easy internal mobility, promising services, employees knowledge, prompt services, exact services, immediate response to customers, courteous communication, returns and exchanges, convenient operating hours and acceptance of credit cards were associated with factor one.

Similarly, the variables such as attractive and convenient public areas, doing it right, error free transactions, easy accessibility, employees confidential behaviour, individual caretaking, handling customer complaints and convenient parking were mingled with the factor two. Likewise the SERVQUAL items namely time promising service, security in transactions, courteousness of employees and sincerity in problem solving were correlated with factor three. Moreover, the variables such as supply of right product and offering quality products were associated with the factor four. Finally, the Bartlett's Test sphericity with the result of chi-square test shows that the inter correlation matrix of the 27 SERVQUAL items were not an identity matrix at 1 percent level.

Discussion

In this article the authors applied the SERVQUAL instrument proposed by Dabholkar A. et al, (1996) to evaluate the retail service quality of food retailers and validation of the instrument was also done for the food retailers located in Chennai City setup. The evolution of service quality of food retailers purely depends on the scrutinisation of the five factors namely physical aspects, reliability, personal interaction, problem solving and policy. Evaluation of SERVQUAL refers to the contribution of these SERVQUAL items under five factor to the overall service quality. As far as the physical aspects were concerned, the food retailers in Chennai city excelled in easy accessibility, easy internal mobility and also they facilitate modern equipment and fixtures in their retail store which increased the service quality. On the other hand, reliability also influenced the service quality to some extent. The retailers rendered timely supply of right products, performed time promised services and error free sales transactions which enabled the service quality. Moreover personal interaction was another factor which influenced the service quality. An employee in retail stores gives individual care to their customers. Confidential behaviour of employees also boosted the service quality. Another factor, problem solving is a difficult one on the part of retailers because the retailers solved the problems of customers with sincerity and handled the customers' complaints in time. They also accepted the returns of goods and exchanges made by the retail shoppers.

Finally, the factor policy was scrutinized and the results showed that the service quality of food retailers increased due to offering of quality products, arrangement of convenient parking facilities, convenient operating hours followed at present and acceptance of credit cards. As far as validation of the instrument is concerned, only four factors were enough to evaluate the service quality under 27 items of the food retailers in Chennai.

Managerial Implications

Managerial Implications means the improvements that have to be done in the areas that are lacking. The retail managers have to take necessary steps in improving the service quality. Here, in this research article we had identified five factor dimensional models, which assess the service quality of a food retail store.

The first variables explain the physical aspects of a retail store. In this connection the retail managers have to concentrate on good looking shopping attitude and the various amenities which have to be provided for the retail customers.

However, the second factors reliability measures the right services, which have been provided to the customers. The retail managers have to enhance their quality in supplying the products at the right time; they have to execute the services at the right moment.

Finally, the SERVQUAL factor examines the retail store quality offerings to its customers. More development is needed in the part of credit cards provided in their own name. So, retail managers have to concentrate on this part and try to improve conceptualized acceptance in providing own credit cards to its regular customers.

To conclude, this research paper based on the research implications of RSQS instrument paves the way for directions in future research. It proposes more developments to be contributed in this discipline.

Keywords: Retail Service Quality, Organised Food Retail, Scale Validation.

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Service Outsourcing: Information Technology

Morteza Maleki and Anand D.

Application Services Providers (ASPs) exploit the economics of delivering commercial off-the-shelf software over the Internet to many dispersed users, but the decision-making process to adopt the ASP business model can be complex requiring a comprehensive consideration of various factors. As a new form of outsourcing, the ASP business model differs from traditional outsourcing models with respect to the attributes associated with vendors, clients, and applications. These differences are expected to demand decision models that are distinct from those in the traditional IS outsourcing. In this paper, after presenting different categories of ASP services utilized in the market, a comparative study is made on the Traditional IS Outsourcing and the ASP Business Model supported by examples. The paper concludes presenting different types of ASP followed by future of the ASPs.

Originating with the financial and operational services sectors in the 1960s and 1970s, IS outsourcing has existed for about four decades. Since its inception, IS outsourcing has experienced tremendous changes, in the scope of what is outsourced from initial software development to server hosting and application maintenance; in the degree of application customization from case by case customization to commercialization and standardization; and in infrastructure ownership from clients to vendors (Lacity, et al., 1995). For example, in 1989, Kodak totally outsourced its IS department to IBM and its partners. It was a flagship event that publicized outsourcing as an alternative IS management approach (Applegate and Montealegre, 1991). Moreover, the explosion in Internet IT outsourcing connectivity and increased bandwidth, coupled with the ubiquitous nature of computing, has made delivery of software applications from remote data centers technologically feasible and economically attractive. Thus, the ASP business model, a new form of outsourcing, has emerged.

Mr. Morteza Maleki, Research Scholar, # 821, 13th Cross, 13th Main, B Block, 3rd Stage, Vijayanagar, Mysore-570017, Email: MortezaMaleki80@gmail.com

Dr.D.Anand, Faculty, B.N. Bahadur Institute of Management Sciences, Manasagangotri, University of Mysore, Mysore-570006, Email: ananddodamadaiah@rediffmail.com

The ASP business model assumes that an ASP remotely provides enterprise applications via a wide area network, e.g. the Internet, to one or more clients

(Susarla, et al., 2003). This one-to-many ASP hosting model will lend itself to certain ASP economies-of-scale by providing standard applications to multiple clients (Gillan, et al., 2000). This model dramatically changed the software delivery mechanism from purchased licensing to leased web services (Greene, 2001). In the ASP business model, an ASP will generally take the full responsibility for software purchase, application maintenance and ongoing updates, while clients may require only a Web browser to access its applications online. To acquire these services, an ASP's clients are commonly charged a fixed minimum cost plus a variable fee based on usage time or user sign-on activities (Koch, 2000). One practitioner characterized acquiring ASP services as similar to buying voice mail services from a telephone company (Kearney, 2000).

ASPs became popular in the early 1990s and since then have grown. Currently, ASPs play an increasingly important role in influencing IT resources decision making (Lacity and Willcocks, 2001).

ASP and Traditional IS Outsourcing

It was in 1950s, when general outsourcing activities, that is, "the transfer of operational responsibility of either business processes or infrastructure management to an external service provider" (TripleTree, 2000), started. The initial motivation of outsourcing was to produce products or finished certain activities with lower costs (Lacity and Willcocks, 1998) traditional outsourcing focused on business applications—such as payroll processing—and product manufacturing rather than focusing on technology.

Contract subscription is the principal way in traditional outsourcing to acquire applications externally in order to achieve an optimal resource management (Lee, et al, 2002). For example Boeing outsources its airplane parts to other manufacturers with comparative advantages (cheap labour or a special design process) for better cost control (Brown, Hegal III, and Durchslag, 2002). As a resource alternative, outsourcing provides companies additional options rather than total in-house development. Furthermore, a change in internal operations is caused by outsourcing since the companies using outsourcing begin to rely on external vendors. Generally, close relationships such as strategic relationships are established with outsourcing vendors, thereby, reducing risks and maximizing stability for the clients.

Information systems have got importance increasingly in the management and operation of an organization as technology develops quickly. A high level of expertise is required in order to maintain complex information systems internally. Outsourcing of the information systems applications or IT infrastructure became increasingly attractive in the 1980s. For IS management, IS outsourcing became an important option. The major functions outsourced at that time were software development, and IT operational activities (McFarlan & Nolan, 1995). Moreover, other activities fallen within the scope of functions outsourced were internal network infrastructure set up, application design and development, and business process management. Furthermore, in 1989, when Kodak signed a contract that effectively transferred all internal IS functions, personnel, and IT assets to IBM< IT outsourcing took a new face (Willcocks and Lacity, 1998). This total contracting out of IS functions and assets encompassed more than subcontracting. Similarly, it is not surprising that definitions of outsourcing have ranged from subcontracting selected IS functions to wholesale takeovers of IS business units.

Gilbert was the first person who used the concept of subcontracting in 1993 to describe traditional IS outsourcing. He suggested that traditional IS outsourcing takes place when "a third party — 'the outsourcer —'takes responsibility for the performance of the certain services or the operation of certain equipment required for its internal operations" (p. S7). But this definition is too narrow in describing outsourced services and applications. Information System outsourcing has gone through huge changes in service scope and methods in the past few years. Grover, et al., (1998, p. 80) defined outsourcing as "organizational decision to turn over part or all of an organization's IS functions to external service providers in order for an organization to be able to achieve its goals." ASPs appeared as the result of well-developed network technology — Internet — as one type of outsourcing. No single definition of ASP is agreed upon. For instance, Rutherford (200) defined ASP as "companies that rent software functionality over the internet or private network." The Information Technology Association of America (ITAA) provides a broader definition of ASP, going beyond application services. According to ITAA, [an ASP is] a 'for profit' company that provides aggregated information technology resources to clients remotely via the Internet or other network arrangements. ASP Industry Consortium defines ASP as follows; "[An ASP] manages and delivers application capabilities to multiple entities from a data center across a Wide Area Network." A wide range of applications is offered to clients by ASPs, including enterprise systems, collaboration services, E-business, education, and vertical market specifics. The summary of all of these applications are in the following table:

Table 1: Categories of ASP Services (ASPislan, ASPdictory, ASPnews, 2003)

Application Service Type	Application subcategories & Service Examples	ERP Example
Enterprise Management	The whole ERP System	Agilera, Appshop, Netleger, Oracle, PeopleSoft, SAP, Usinternetworking
	Logistics and Manufacturing	Aspeon Technology
	Finance & Accounting, e.g., payroll processing, credit checking	Ultimate Software, Intacct, MetraTech, Miva, EDS, Oracle, PeopleSoft, SAP
	Sales Automation	Aspeon, Salesforce, Salesnet, Upshot
	Human Resources	ADP, Ceridian, PeopleSoft, SAP
Collaborative Services	Email Systems, Groupware, Online Meeting & Conferencing, Wireless Messaging, Central Phone Systems	Lotus Notes, Apptix, Placeware, WebEx, Microsoft
	Document Management (multi-language/image/audio), Data	Oracle, MS SQL, Enhanced Technologies, Bxmail AG, Integris
	Warehouse, Business Intelligence	
	Publishing Management, Company Directory Management	Directory Engine, Active Data Exchange
	Microsoft Office, WorldPerfect , Office Star Office Systems	Microsoft, Corel, Sun Microsystems
E-business Services	Wireless Business Services	Aspective, Sprint, Microsoft
	Online Transaction Process, e.g., billing	You-invoice.com
	Website Design & Development	Atomz, Aspect Development, Parametric Technologies
	Website Analysis	Websidestroy
	Supply Chain Management	LivePerson, Middle wills, Aptech
	Customer Relationship Management, e.g., call center	Aspective, AMS, Agillion, Siebel
Education & Training	Online Learning & Teaching, Online Book & Training	Blackboard, WebCT (Owned by Blackboard), Learning Station, Learning Network, Micro Teams, SnowDropSystems, Netexam

Vertical Market Specifics	Healthcare: doctor tracking system, medical record system, insurance billing system	healthIS, eClickMD, HealthTech Soft, MediSolution, Mddatacenter, eHealthEngine
	Hospitality: reporting systems, travel planning, restaurant sales management, property management end-to-end sales	Central Point Technology, Stability, AsianPcExplorer, SilverByte Management, ADP
	Finance: credit checking	ApproSystems
	Law Firms: Intellectual Property Protection	Halo Solution, Network Technology Group, Trion Technologies
	Public Relationship (agency, government, association), Public Relationship Automation	Vocus
	Real Estate: property management	Enhanced Technology, App Rent

Enterprise systems or *Enterprise Resource Planning* (ERP) systems cover all the functions associated with the enterprise operations, including finance, sales and distribution, human resources, inventory management, and production planning. In other words, enterprise management refers to the management of the enterprise systems. Some ASPs in this category can offer the full package of enterprise services, while others only concentrate on one function. For example, Employees uniquely allows [firms] to choose the perfect blend of in-house and outsourced HR and benefits administration while maintaining absolute control of [the firm's] employee information (employees.com). Or, "[Salesforce's] CRM software-as-a-service solutions combine award-winning functionality, proven integration, point-and-click customization, global capabilities, and the best user experience," the result of which "is CRM success." It is in "comprehensive on-demand business software as a service (SaaS) market," and is the biggest market player in providing sales and Distribution services, among its other services (salesforce.com).

Applications such as email systems, messaging, online conferencing, data storage and analysis, publishing, and office automation all are parts of *collaborative services*. These services entail *all the applications for communication and data sharing*. For instance, "*WebEx Communications Inc.* is a Cisco Systems, Inc. company that provides on-demand collaboration, online meeting, web conferencing and video conferencing applications. Its products include "Meeting Center," "Training Center," "Event Center," "Support Center," "Sales Center" "MeetMeNow," "PCNow," "WebEx AIM Pro Business Edition," "WebEx WebOffice," "WebEx Connect," and others. According to analyst firm IDC, WebEx is an on-demand market leader (Wikipedia).

E-business services entail applications associated with online transaction processing, for both customers and suppliers. As one part of e-business solutions, website development, including website analysis and content development is also covered by these services. Although these services are not the mainstream functions in outsourcing, these ASPs, like Atomz (atomz.com) and Parametric Technology Corporation (PTC) can still create profits on these services. For instance, "Atomz Search is a hosted application and is delivered completely over the Internet. It offers its services by creating a professional site search solution delivered as a hosted service and supports [its] costs through text-based advertisements" (atomz.com). Or, Parametric Technology Corporation (PTC) provides Product Lifecycle Management (PLM) engineering CAD/CAM software and content management and dynamic publishing solutions to more than 40,000 companies worldwide (Wikipedia).

Another application service is *Education Application*, which includes online user training program, and distance learning systems. They can be used for K-12 education (a designation for the sum of primary and secondary education, used in the United States, Canada, and some parts of Australia). It is used in the United States, Canada, and some parts of Australia (Wikipedia), higher education and training activities in corporations and government. For example, Blackboard Inc (blackboard.com) offers online course management services to many universities nationally and internationally. "Blackboard in Practice" has the services such as higher education, k-12, professional education solutions, etc. Or, "WebCT (Course Tools), (now owned by Blackboard and being phased out), is an online proprietary virtual learning environment system which is sold to colleges and other institutions and is used in many campuses for e-learning. Instructors could add to their WebCT courses tools such as discussion boards, mail systems and live chat, along with content such as documents and web pages" (Wikipedia).

Vertical Market Specifics (VMSs) offers a range of value-added products particularly suitable for specific industry. ASPs providing VMSs are active in many industries such as Finance, Healthcare, Legal Services, Real Estate, Public Relationship, Retail and Hospitality. Because institutions generally have a large number of data and seek efficient technology support for data processing in finance and healthcare, they are identified as the two most promising industries for the ASP business models. For example, "founded in 1999, SecureCARESM Technologies, Inc. is recognized as a leading developer and provider of Internet-based document exchange and e-signature solutions. The company's technology product brings efficiency, compliance and greater profitability to the medical community serving home healthcare patients. SecureCARE Technologies, Inc. delivers a HIPAA-ready, Internet-based document exchange solution for physicians and clinics, home healthcare agencies, hospice and durable medical equipment providers. These applications enable exchange of every type of patient care document in a secure and easy to use environment" (eClickmd.com).

Comparison between ASP and Traditional IS Outsourcing

Though the ASP business model has been developed based on traditional IS outsourcing, they are different. Attributes that distinguish the traditional IS outsourcing and general ASP business model can be categorized into three: *Characteristics of the Vendors*, *Characteristics of the Customers, and Characteristics of the Applications.* Customers, vendors and products are the principal components in the market. These three major dimensions are widely adopted to compare business models. The comparisons between these two models are summarized in table below:

Table 2: Traditional IS Outsourcing vs the ASP Business Model

	Attributes	Traditional IS Outsourcing	Application Service Provision
Customer Characteristics	Target clients	¤ Large Organizations, e.g., Fortune 500 ¤ With Own IT Department	¤ Initially, Small or Medium-sized organizations with low IT expertise ¤ Currently, Large Organizations are involved
Vendor Characteristics	Vendor Characteristics	¤ Large Corporations ¤ With Potential Global Span ¤ Outsourcing is Small Part of Business	¤ Most ASPs are Smaller Entrepreneurial Firms, Lack Name Recognition, and Outsourcing is the Core Revenue Stream ¤ Some New ASPs are Large Companies with Hosting as a Small Part of Business

Product Characteristics	Functions Provided	¤ Application Development ¤ Information Utilities & Business Processes ¤ Operation of Internal IT Infrastructure	¤ Web-enabled Application Delivery ¤ Productivity Applications, Data Management, Internet Access
	Extent of Customization	¤ High Customization is Available	¤ Standard Software Packages ¤ Clients Pay for a Customization Separately
	Resource Ownership	¤ Clients Retain ownership of all or some Hardware & Software ¤ Clients Retain Control	¤ Vendors Responsible for Server Hardware, & Owning Application Licenses ¤ Clients Only Need Web Browsers
	Contract Types	¤ Case-by-Case detail Contact ¤ Long-terms (often 10 plus years) ¤ Strategic Partnering "Alliance"	¤ Standard Contracts ¤ Initial Payment & Monthly Usage Fee ¤ Short Terms (One to Three Years).

In traditional IS outsourcing, a large outsourcing vendor and a large client company base their negotiation on a case by case process. Lacity and Hirschheim (1993) argue that large companies perceive outsourcing as a feasible way to reduce IS costs and risks, even among clients with well-established IS departments, significant customization of the applications, and large IT investments (Grover, et al., 2000). For example large firms that outsourced significant internal IS functions was Boeing, which hired EDS to build a private nationwide optical network and Air Canada which hired Unisys to provide cargo application and service development in 2002 on the contrary, ASP targetted smaller firms. The reason is that smaller firms might be adequately supported by shrink-wrapped applications from third party software companies (Cleaver, 2000). Midsize firms, due to the fact that they are struggling to keep pace with technology change and increasing workloads with few staffs and minimum budget, find ASPs attractive (Heart & Pliskin, 2001).

Companies like EDS (eds.com), IBM (ibm.com), and AT & T (att.com), as traditional vendors, are examples of long-established companies with strong IT expertise. Usually, they have strong financial foundation and possess good reputations in the industry. In contrast, as the ASP business model emerged, ASP companies were most likely to be newly established small or medium sized companies in which online application delivery was the principal part of their business (TripleTree, 2003). Nevertheless, as ASP market grows, more and more large IT companies are joining and subsequently introducing changes into this market.

TripleTree (triple-tree.com, 2000) classified traditional outsourcing functions into three types:

¤ *Application Outsourcing*, including application development and maintenance (Accenture. Com is an example).

¤ *Information Utilities and Business Process Outsourcing*, including complex or repetitive business activities such as payroll processing [EDS (eds.com) is an example] vendor.

¤ *IT Infrastructure Operation*, including network, hardware and data center functions (Hewlett-Packard (hp.com), is an example vendor.

In contrast, ASPs deliver web-enabled application software either through Internet or a dedicated connection. The "Universal Interface" of a web browser avoids the need to install and control the client side of the application interface. This independence of client from server could significantly alter the possible forms and time scale of interactions compared to traditional outsourcing setting.

Moreover, vendors of traditional outsourcing are more prone to tailor there is functions to suit client's specific needs in case-by-case. ASPs, though, are more likely to standardize their products. By this, they try to gain economy of scale by delivering standard applications to multiple clients.

Clients in traditional IS outsourcing require to purchase both hardware and software, while vendors further develop and test the system. The owner of the final products is clients. However, in the ASP business model, the owner of the final products is ASPs themselves, and they host all the systems and applications (Gillan, et al, 2001). Clients do not need to purchase software or invest significantly in hardware. They will only own the data that is used to process information. In this way, ASPs are responsible for application establishment, 7/24 maintenance, and timely updates, whereas clients need to have access to Web browsers to utilize leased applications. In other words, in an ASP business model, a "thin client which does not have significant investment and maintenance," can be perfectly achieved.

Furthermore, traditional IS outsourcing is a long term strategic arrangement and covers a broad scope of functions; the detailed contract between two parties will last 7 to 10 years, entailing a huge investment, thereby providing more flexibility .... Koch (2000) mentioned that a common pricing approach for clients is a minimum initial setup charge, plus service fees based on time or user sign-ons. Therefore, clients are able to easily measure and control application costs.

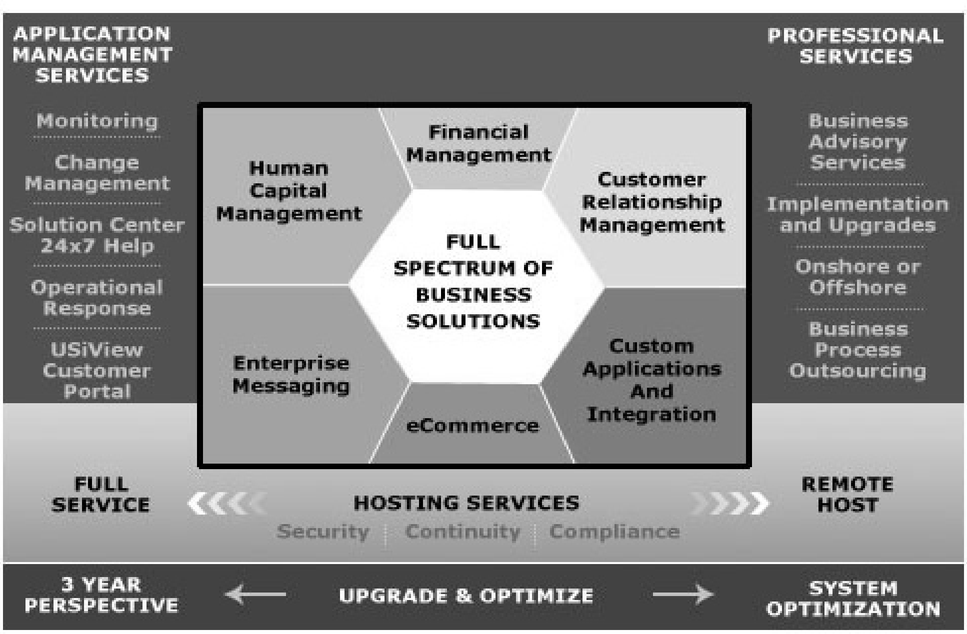
Types of ASP

Horizontal ASPs

Horizontal ASPS refer to companies which are Small or Medium in size and provide standard applications online to clients across industries with little or no customization. By offering one to

Figure 1: Business Processes in USi's Services

Business Processes Enabled by USi's Services



Source: http://www.usi.com/services.aspx many services, horizontal ASP benefits from the economies of the scale (Gillan, et. al., 2000). By partnering with software vendors, they lease access rights of software to clients. Therefore, though owned either by the ASPs themselves or by some third party — some other software vendors, the application software is hosted only by ASPs. These types of ASPs are normally offered by newly established companies running online applications as their principal business. The clients of horizontal ASPs have neither a specific IT department nor IT professionals, and usually they lack any IT knowledge.

Horizontal ASPs are further divided into two subcategories: specialist ASPs only offering a single application for clients across many industries, and pure-play ASPs providing all kinds of applications for all industries. For example, *WebEx Communications, Inc,* a *Cisco* company is an example of Specialist. WebEx creates on - demand software solutions for companies of all sizes. [Its] online meeting applications and software services help [its] customers all over the world fulfill their most ambitious goals for marketing, sales, training, and support. [It] leads the world in online meeting applications. As evidence of this, more than 3.5 million people use Cisco's WebEx products every month to communicate and collaborate online (webex.com). *Usinternetworking (usi.com)* is the most widely recognized pure-play ASP in the US. USi uses a highly automated, efficient, systematic approach to deliver worry-free hosting and application management services (usi.com).

Vertical ASPs

In vertical form of ASPs, vendors offer special applications for specific industries, like legal firms, hospitality firms, healthcare firms, etc. Since vertical ASP vendors are familiar operations and processes in a specific industry, it can design online application packages according to the special demand of those companies in the industry they serve (Hear and Pliskin, 2001). The principal business for vertical ASPs is online application delivery. Because of having deep knowledge of the industry, each vertical ASP has its featured products to market themselves. By outsourcing non-strategic applications, though having their own IT professionals, vertical ASP clients can focus on the business which can create strategic competitive advantage (Currie and Seltsikas, 2002).

Currently vertical ASPs are active in various industries. For instance, MediSolution, a leading Canadian Technology company, is helping healthcare and service sector customers across North America, maximizing operational efficiency, reduce costs and improve service delivery. It addresses the needs of healthcare customers through two rich product portfolios - Health Information Systems and Resource Management. [Its] MediSolution branded healthcare applications and [its] Virtuo-branded resource management applications are being used by more than 500 healthcare customers (medisolution.com).

Independent Software Vendors

Independent Software Vendors (ISVs) are software companies which have application hosting services. They develop and own the software. Having solid financial foundation, ISVs are top-tier famous vendors, being strong in software development and maintenance. Since their familiarity with the software products is high, they are able to provide back-end solutions to clients. They seek tighter association with small and medium clients aiming to maximize their base of application users. Usually, application hosting is an extension business to these ISVs, so the ASP center is only a department or a division. These ISVs' ASP centers target small or medium sized companies who lack financial and technological capabilities for buying and running large software systems in-house. The implementation cycle for independent software vendors is the longest among these three ASP market segments since the application services are extremely complex.

Moreover, high-end, complex enterprise software, such as Enterprise Resource Planning (ERP), Supply Chain Management (SCM), or Customer Relationship Management (CRM), is the major service which is offered by ISVs. However, "… [there is the issue of] overhead involved in supporting ISVs software round the clock on a 24/7 basis. They're used to helping customers deploy their software, but providing ongoing service is a very different concept. Software companies aren't conscious of the extent of the impact that downtime has on the customer, for instance during upgrades or configuration changes." (Rebecca Lewin, aspnews.com) Enterprise System vendors like Oracle, SAP, IBM, etc. provide enterprise applications online. For example, IBM runs the biggest hosting service center for all kinds of clients.

The features of the three categories—Horizontal, Vertical, and Independent Software Vendors (ISVs)—are summarized below:

Table 3: Categories of ASPs

	Horizontal ASP		Vertical ASP	Independent
	Pure-Play ASP	**Specialist**	**(Specific Industry)**	**Software Vendor**
Application Services	General application to all clients	Only one application to all clients	Domain-focused applications	Large enterprise systems or complex suite of software
	Little or no customization	Little or no customization	Little customization; customized according to the special requirements of the company	Combination of standard applications, industry solution and customized applications
Vendor	ASP service is principal business	ASP service is principal business	ASP service is principal business	ASP service is one part of the business
	Small or newly set-up	Small or newly set-up	Small or newly set-up Industry reputation	Large companies National reputation
	Purchase or rent software from partners	Purchase or rent software from partners, offer unique application	Own or rent software form partners, Offer unique solutions	Develop and own the software
Customers	Small or medium businesses	All types of companies	All types of companies in specific industry	All types of companies, including large companies
Examples	Usinternetworking	WebEx	MediSolution,	Oracle, SAP, IBM

The Future of ASP

Behind all IT/IS products and services is the Internet as a single driving force. Communication is possible around the globe, and we are able to buy and sell items 24 hours a day, learn about virtually any subject and the opportunities continue to expand as new ideas are incorporated into current technology. At the same time, companies are looking for innovative methods for accessing information, entering new markets, gaining new sources of capital, and improving their manufacturing productivity as the pace of business speeds ahead. Survival is dependent on speed.

Three big challenges that companies should face are *time to solution*, *time to market* and *time to profit*. The vendors of the outsourced products, i.e., ASPs, try to utilize this opportunity to meet those future demands by giving customers' access to new IS/IT capabilities and functionality to help them achieve their strategic goals quickly and with minimum risk.

ASPs can no longer concentrate on long-term contracts because the business cycle will no longer allow it. Vendors must be prepared to come into an organization ready to meet today's challenges while simultaneously preparing the strategy and developing the tools to compete in future markets. ASPs need to provide the capability of overcoming business obstacles and providing the expertise, technology, and resources that complement each client they serve as they determine their path of success. ASPs can provide total force through local, regional, and global support that not only keeps pace with competitors, but also expands the markets within the global economy. ASPs have to be prepared to meet every challenge and establish the standards for tomorrow, as technologies evolve and new standards appear.

Conclusion

A fundamental shift is taking place in the way businesses are using information technology to gain operational efficiencies and strategic advantages. The new information-processing paradigm called Application Service Provider (ASP) is changing the dynamic of business application delivery and management. ASP offers businesses reliable and secure access to every conceivable application via the Internet. ASP diminishes, or eliminates altogether, businesses' needs to operate their own information resources and manage hired staffs. It does so by substituting usage fees for businesses' capital outlays for technology, facilities, and staff. It also provides higher levels of service allowing businesses to focus more on their core competencies rather than running their own IT.

ASPs are complex, both in a business sense and technologically. Ample confusions accompany with ASPs' potential. This paper attempted to alleviate some of this confusion by defining the ASP terminology and frameworks to address what ASP really is, what are the different types of ASPs and the future of ASPs.

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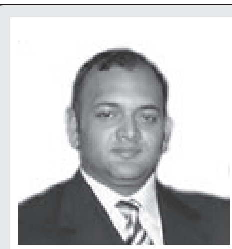
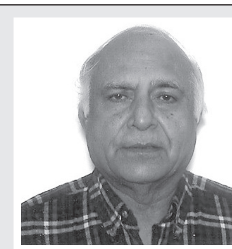
Booze and Business in US

Frank Coronado, Ram Mishra and Jitendra M.Mishra

Alcohol in business negotiations is a growing concern for many organizations. Alcohol consumption costs American business over $86 billion annually in lost productivity, absenteeism, and health care costs [Mintcloud 1991]. It is significant for managers to make a decision to drink carefully and rationally. Alcohol has gone along with business transactions for centuries, whereby consuming alcohol is an essential part of the business dealings. Many business negotiations are conducted in bars and restaurants under the influence of alcohol. This paper discusses the influence of alcohol on business negotiations and the role of alcohol in many cross-cultural settings.

The dictionary defines negotiations as "to discuss with the goal of finding terms of agreement." Whatever business you are in, whether you are an entrepreneur or a manager in a large company, you are negotiating all the time. Strategy shapes the structure by means of actions taken to influence who will be at the table, what the agenda will be, what their BATNAs (Best Alternative to Negotiated Agreement) are, what kind of behaviours are to be displayed (direct/confrontational/loss of face or indirect/save the face), and what their interests, motivations, and priorities are. Should you leave 'money on the table' when you negotiate, or escalate the dispute to the point where costs outweigh the gains, or become emotional and obtain the worst outcome? What will be the 'bargaining ranges' of the parties? What are the 'walk-away-points' of the parties?





Dr. Ram Mishra, MBBS, Student - MS Bioinformatics, MHA (Health Administration), Grand Valley State University, 3360 E. Fulton St., Grand Rapids, MI, 49546, USA.

Prof.Jitendra Mishra, Professor Management, Seidman College of Business, 469c DeVos Center, 401 W. Fulton, Grand Rapids, MI 49504 USA, Email: mishraj@gvsu.edu

Mr.Frank Coronado, Student, Grand Valley State University, 2550 Westbrook Dr NW, Grand Rapids, Michigan 49504. (Photo not given)

Culture affects negotiating strategies. In the individualist culture, norms promote autonomy of the individual. Both confrontational and motivational behaviours may stem from the cultural orientation. Reluctance to confront directly in a negotiation may stem from the emphasis on cooperation in the collectivist culture. The indirect approach is thought to be relationship-preserving, and the confrontational approach signals a lack of respect for an individual with whom you have a relationship. High-power-distance cultures are hierarchical. In hierarchical cultures, social status implies social power. Social inferiors are expected to defer to social superiors. People in hierarchical cultures may be reluctant to confront directly in negotiations because confrontation implies a lack of respect for social status and may threaten social structures. People in low context cultures prefer to communicate directly. Information is explicit (e.g., George W. Bush). People in high-context cultures prefer to communicate indirectly. People from different cultures vary in their preferences for direct verbal confrontation to indirect confrontation. *Motivation* is all about negotiators' interests. Negotiation may be concerned about *self-interest*, about *the interest of others*, or about *collective interests*. Information about BATNAs, about interests, and about priorities affect agreements [Brett]. Effective negotiation is about good communication. To communicate effectively, the negotiators must constantly be aware of a) their own words and actions, b) the meaning that the other side gives to those words and actions, and c) the words and actions of the other side. Negotiation is a process—a progressive movement toward a goal. In an international business negotiation, the goal is a deal.

Alcohol in Negotiations

Alcohol is a part of many people's social life [www.scotland.gov]. You feel connected with a person, sending a message you are on the 'same team' if you share a drink with that person. It makes one more comfortable and relaxes you. Alcohol has long been associated with relaxation, enjoyment, and celebration [www.Scotland.gov]. Alcohol can make people talk more, which increases the possibility that they will find things that they have in common. It makes them feel more like friends than just businessmen. With a blood level of .01-.05, your behaviour is said to be 'nearly normal by ordinary observation' [www.rupissed.com].

Generally ignored, however, is the fact that even mild amounts of alcohol can significantly influence, sometimes positively and often negatively, the process and outcomes of business interactions [Schweitzer and Kerr 2000]. Its benefits or its damages are purely situational, and outcomes vary tremendously. Alcohol can be very powerful, and the decision to consume it should be taken very seriously. Until recently, the two-martini lunch was a norm and was widely accepted in business luncheon settings. Various testimonies tell about the good old days: "When you wanted to meet another company you invited its managers to your smoke-filled dining room and drank yourself into a partnership," as one commentator remarked [Tung 1995].

Alcohol can facilitate relationship-building in several ways. As anyone who drinks knows, people tend to relax while consuming alcohol. This is the benefit that those who drink socially or in a business setting are most often striving for. The idea of using alcohol to loosen up is really the crux and motive behind almost all introductions of alcohol into a business environment. While a group of people consume alcohol, they become more socially comfortable. Even if members of a group have never met, consuming alcohol forms a feeling of "common ground" between those that are drinking. "Every guru nowadays preaches the value of 'trust' between colleagues, suppliers and customers" [Tung 1995]. This helps to break down the barriers of awkwardness or introverted behaviour. "Since alcohol lowers inhibitions people tend to exchange information more freely" [Mehta 1996]. Alcohol derives its bonding effect from its impairment of physical and cognitive functioning. It creates an atmosphere of shared dependency and vulnerability (because it reduces a person's ability to think and act clearly).

Managers should use alcohol strategically to gain an advantage over the other party. Alcohol affects different people in a variety of ways; it most generally puts people in a more positive mood. Recent research has linked the effects with negotiator behaviour, and found that negotiators in good moods tended to be more cooperative, creative, and effective in achieving joint gains.

Alcohol can also impede business dealings in various ways. As generally assumed with alcohol consumption, people can be easily misled. Use of alcohol can increase aggressive behaviour and may aid aggression that can escalate to conflict/ misunderstanding. Intoxicated negotiators can insult, mislead, misrepresent, and threaten partners and others. Alcohol impairs the mental process, perception, reasoning, and intuition. It enhances mistakes and can lower work performance. Alcohol impairs short-term memory and causes the decision-maker to make mistakes and become myopic

[Steelem and Southwick 1985]. Alcohol consumption can increase self-disclosure, causing leaks of personal information and problems, and even business information and problems, and provide an advantage to the negotiating counterpart [Phaneuf 1995]. Others have reported that alcohol consumption inflates positive self-perception [Carey 1995]. Intoxicated negotiators fail to notice non-verbal cues, negative feedback, and impaired conversation and judgment. One real estate investor signed a contract during a late night dinner to sell a property that she had owned for nearly twenty years. When she woke up the next morning she realized that the property was worth double the sale price. She later said that she had been swindled by 'Bordeaux wine.' This negotiation technique was abused enough to justify the courts stepping in and trying cases of making decisions while intoxicated. Growing corporate liability is a real threat that many companies now face and try to guard against. In 1991 a Florida company paid $800,000 in punitive damages after a drunken employee caused an accident coming home from a trade show.

Drinking customs differ across various cultures [Heath 1995]. In some cases, even the type of alcoholic beverages, such as the maotai in China or the makkolli in Korea, can carry deep cultural significance. In China, 'business negotiations have traditionally begun with a series of toasts.' The ritual of toasting the friendship and the mutual obligation between the two parties provides a symbolic foundation for subsequent business dealings. In Japan, drinking is viewed more as a ritual duty than a social pleasure. Japanese managers tend to think that it is impossible to truly know someone without drinking heavily with him or her. Koreans have the most aggressive approach to social drinking. They consider it rude if a guest refuses to drink with the party without making a good excuse. Koreans also love drinking games and off-key singing performances. Their motto is: "The more off-key the song, the greater the sense of openness and trust among participants" [Schweitzer]. Koreans will also hold you quite responsible for what you say when you have been drinking.

The concept of 'drunkenness' also varies from country to country. In Russia, being 'drunk' is not considered to be a big deal and in most cases will not raise a few eyebrows. It may be considered a symbol of camaraderie and cohesion by Japanese and Korean hosts. In Germany, it is the exact opposite. Although alcohol consumption is considered to be very high there, being 'able to hold one's drink' is considered an important aspect among the professional and managerial class [Schweitzer].

In some Islamic cultures such as Saudi Arabia (not Egypt), Malaysia, and Indonesia, drinking is strictly constrained. In other cultures such as Japan, China, Korea, Germany, and Russia, the refusal to drink may be interpreted as a sign of mistrust. In general, *Western and Eastern business customs differ*. The *Westerners celebrate at the conclusion* of a negotiation while *Russians, Asians, and other cultures use alcohol to initiate personal relationships*, proceedings, and toasts to satisfying outcomes. They want to establish a personal/social relationship first and then do business. The Westerners want to develop social relationships after business interests have been attended to.

In China, business deals/negotiations start with a series of toasts. The first toast contains an important statement about friendship, emphasizes mutual obligations, and ends up with *ganbei* (dry glass or bottoms up). In Russia, a hard drinking country, there are a series of toasts and they feel compelled to finish a bottle of vodka once it is opened. It is recommended that you participate in the first two toasts. The first is to the meeting and the second is to the host. In Japan, drinking is viewed as a duty/ritual and accompanies all business dealings [DeMente 1994]. In Japan important business meetings are held after hours, and everyone is expected to become extremely intoxicated [Economist 1993]. During *tsukiai,* (hierarchical relationships are not observed) superiors give candid feedback to subordinates, discuss performance evaluations and shortcomings without the 'loss of face,' and are not held accountable to the exchanges. In Korea, refusing to drink is considered rude and insulting. Koreans are more likely to hold you responsible for things you promised while drinking than are Japanese [Leaptrott 1996]. The Germans do drink a lot, but holding one's drink is considered important among managers and professionals.

Alternatives to Drinking

The decision to mix drinking with business merits careful consideration rather than thoughtless consumption that often characterizes its use. To better aid the business world from alcohol-induced disasters, alternatives should be explored. Alternatives to consuming alcohol in business negotiations include changing the setting for the negotiations and exploring informal surroundings to facilitate a comfortable and friendly atmosphere. Avoiding evening events where alcohol is likely to be available easily removes the desire for a drink.

- Lunch meetings rather than dinner meetings.
- Café or coffeehouses rather than bars or nightclubs.
- Sporting events including hockey and basketball.
- Golf outings (25 percent of all negotiations now take place on a golf course instead of a bar.)
- Informal settings such as spas and steam baths. (In Russia, steam baths represent a popular venue for building business relationships.)

Choosing to discuss your business relations over lunch in a café or coffeehouse reduces the need for alcohol to seal the deal [Tung 1995]. To avoid consuming large amounts of alcohol, it is better to drink non-alcoholic versions of alcoholic beverages such as a virgin Bloody Mary. One can honour traditions of the host and/or visiting country by toasting without consuming. In order to explain your actions without dishonouring their tradition, offer brief explanations such as company policies, health reasons, and drunk-driving laws in certain states. For example, in China it is acceptable to decline a drink for health reasons or stomach problems. The symbolic value of participating in the ritual is more important than actually consuming the alcohol itself.

Recommendation

We recommend that business people abstain from drinking quantities of liquor, beer, or wine during business negotiations. Our suggestion would be to embrace the modern norms that are being established due to the heightened awareness of drinking and driving restrictions in this country. The decision to mix drinking with business merits very careful consideration.

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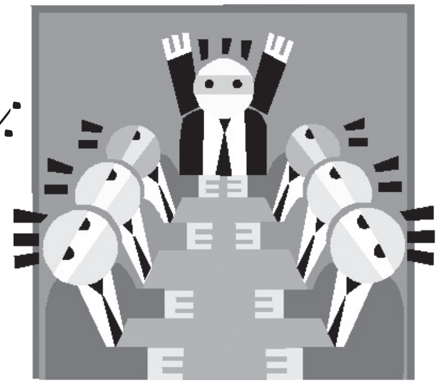

Dimensions of Integrity: Corporate Perspective

Srinivasan M.S.

The modern corporate world as a whole is in the process of acquiring a *Conscience*. Concepts like ethics and social responsibility are becoming part of the main stream of management thought and practice. One of the terms we hear constantly in the current ethical debate, and among corporate executives, is "Integrity." The concept of integrity is perceived mostly in its ethical connotations. But the concept can also be viewed in its psychological and spiritual, individual and collective dimension. This article examines this multi-dimensional significance of integrity in the modern corporate context and in the light of an integral vision of human development.

In the ethical perspective, integrity means honesty, truthfulness, transparency and candour in all transactions. This ethical aspect of integrity is now well recognized in business.We hear top executives talking about integrity as the foundation of long-term effectiveness. Many reputed companies have placed integrity as a core element in their value systems. As Pramod Bhasin, President and CEO of Genpack, states: "For an enterprise to be successful in the long term it has to be founded on a strong platform of integrity and values" and when asked "how do leaders face up to scenarios where there could be a clash between values and pragmatism, especially in the light of competitive pressures," Bhasin answers simply "The choice is easy if you really understand that integrity is non-negotiable" (Bhasin p.2006).

Mr.Srinivasan M.S., Research Scholar at Sri Aurobindo Institute of Integral Management (SAIIM) Society, Beach Office, Research Section, No.2, Rangapillai Street, Puducherry-605002, Email: srinivasan@sriaurobindosociety.org.in

However, modern business has arrived at this awakening to the importance of integrity mostly through pragmatic and environmental pressures like for example, changing competitive landscape, demands of the investor and customer, green or consumer activism, long-term benefits in terms of goodwill and trust, better public image. As the well-known founder of Infosys, Narayana Murthy points out: "Investors,customers, employees and vendors have all become very discerning and are demanding greater transparency in all dealings" (Skaria.G, 1999). But to realize fully the spiritual potential as well as the material benefits of integrity, it has to be pursued for its own sake without seeking for any short-term or long-term material benefits, even while knowing that such benefits may come. For an ethical or spiritual value lived in action releases a moral and spiritual force, which brings material results in the long run. The quality, power and effectiveness of this moral or spiritual force and its results depend on the extent of selflessness and disinterestedness in the motive. This is the significance of the constantly repeated assertion in the Indian epic Mahabharatha, that Dharma is the source of Wealth (Artha).

These are spiritual insights of seers, which cannot be fully validated, in empirical terms. However there are some executives and entrepreneurs in business, who are spiritually inclined, have experienced this phenomenon in their lives. Alvaro Cruz, CEO of the construction company I.C.M. Ingeniers Ltd. states "Non-attachment to your work attracts more income and better result. The less attached you are to the fruits of your work, the more you are likely to get higher profits" (Cruz. A, 2007). And V.V. Ranganathan, a former Senior Partner, Ernst and Young states: "If you are able to run any enterprise without selfish motives and with selfless service, then I believe that success will fall into place" and explains further "what I mean is that my effort and involvement in doing something is not determined or driven by what I get in return. And I know by my own experience this works" (Ranganathan, 2007). The scientific mind may not accept these examples as valid proof. It may question the connection between the cause and effect. But the scientific mind must have the humility to admit that there are faculties beyond the scientific reason which can perceive truth which it can not know.

The Psychological Dimension

This brings us to the psychological dimensions of Integrity. In a psychological perspective integrity means alignment of the physical, vital and mental dimension of the human organism around a focal point of integration. For the individual, the physical dimension is the body. The vital is that part of our being which is the sources of our sensations, feelings, emotions, vitality, energy, enthusiasm and the dynamic faculties of will, action and execution. The mental is the source of our thoughts, ideas, perceptions, reason, discrimination and judgement. The vital being in us seeks for power, wealth, enjoyment, success, expansion, achievement, conquest and mastery over the forces of life and nature. A strong and energetic vital is essential for all successful materialization of the ideas and ideals in the mind. The mind or mental being in us seeks for knowledge, understanding and the higher laws, aims and values of life and the standards of right living.

Thus in a psychological perspective integrity means, for the individual, alignment or harmony between inner intention and outer action or as Stephen Cowey puts "intention drives perception which drives behaviour, which then drives results" (Cowey, S. 2007). More comprehensively stated integrity means harmony among thought, feeling, will and action. I must have the conviction and clarity in my thought, the will what I think, passionate about what I think or believe and finally honest and courageous in executing what I think or feel in my action. This integration of the personality is the source of inner power or charisma and effectiveness in action. This is a difficult achievement, which requires much discipline and self-observation. But it is an ideal worth striving for, because it builds our individuality and helps in achieving our higher potentialities.

But Integrity is not only individualistic but also has a collective dimension. Just like the individual, a collectivity like an organization also has a physical, vital and mental dimension. The physical dimension is the material structures like building or machinery and the rules and regulations, which govern the material life of the community. The vital being in man expresses itself in the collective organism through the economic, social and political life of the community, like its power and wealth structures, interpersonal relationship or interactions, and its systems of execution. Similarly, the collective mind of the community expresses itself through its information systems, knowledge-generating process, decision-making structures, research and development, mission, vision, values and culture. So for the collectivity, integrity means alignment of its physical, vital and mental dimension around a focal point of integration.

The Dharmic Approach

We are now brought to the next question. What could be the focal point of integration which can harmonise the physical, vital and mental dimensions of the individual and the collectivity? Most of the spiritual traditions agree that for the individual the focal point of integration is the deepest and innermost spiritual core or the divinity or the soul in man, which is the fourth dimension beyond our body, life and mind. But this spiritual integration, which is the highest form of integrity, is for most of us a far-off ideal which requires a long and difficult inner discipline. We need a less difficult intermediary ideal which can provide a more practically feasible focal point of integration. Here comes the importance of the Indian concept of Dharma. In this Indian perception, the focal point of integration has to be around some dharmic values.

In the Indian thought Dharma means, values derived from the laws of human and universal Nature, which leads to the material, mental, moral and spiritual progress, well-being and fulfillment of humanity. In its universal sense, Dharma is all those values, ideas, principles or standards of conduct which are derived from the laws of the highest spiritual nature of Man and the world like truth, beauty, goodness, harmony, freedom, equality, interdependence, wholeness, unity, oneness of all existence, and ultimately the source of all these eternal verities, the Divine. Dharma also includes the practical implications of these values for action and behaviour like truthfulness, selflessness, generosity, kindness, compassion, fareness, justice, empowerment, trust, goodwill, service, contribution to the progress and well-being of the larger whole.

Among modern management thinkers Stephen Cowey comes very close to this dharmic conception of integrity. "Personally I believe" states this well-known leadership guru "that the source of the principles that give your life its integrity and its power and its meaning, all of them link up to the Divine. To be a spiritual based leader is to have these universal principles integrated in your inner life and outer action" (Cowey S, 2007). Elaborating further on the nature of these universal principles, Cowey says "The principles I am referring to are the basic universal principles that pertain to all human relationship and organizations, for instance fairness, justice, honesty, integrity, trust. They are self-evident, self-validating. These principles are like natural laws and operate regardless whether we decide to obey them or not — and they provide us with rock-solid direction to our lives and our organization" (Cowey, S. 1996).

But apart from universal Dharma, Indian thought recognized two other aspects of Dharma which provide a pragmatic orientation to the concept. The first one is the Dharma of the relative world of change, of which the most important elements is the dharma of the stage of evolution. Most of us do not have the inner capacity or resources to realize the highest spiritual potentialities of the universal Dharmas. We have to grow towards them through various intermediary stages of mental, moral and spiritual development. The third face of dharma is the dharma of the unique and intrinsic nature of the individual and the collectivity called as swadharma.

The individuals vary in nature, temperament, inclination, capacities and the level of development. Similarly the inner nature or swadharma of a business, political, cultural, educational and spiritual organizations are not the same. For example, while "simple living and high thinking" may be the right system of values for the scholar, saint, thinker and the sage or for an educational, cultural and spiritual organisation, it is not the appropriate system of values for a business organization, or the temperament of a businessman, called as Vysya in ancient Indian thought. The right system of values for the economic, commercial and industrial life of a community is not "simple living" but a beautiful, harmonious and opulent living or in other words, orchestrating a rich diversity into a beautiful and harmonious whole. Similarly the right dharma for the corporate world is not "high thinking" of the abstract, metaphysical or idealistic kind, but useful, pragmatic, generous and democratic thinking which can bring down power, wealth, knowledge, culture, ideas, ideals and values into the lower levels of the economic and social hierarchy and make them accessible to the masses. Similarly the temperament of a businessman cannot grow and prosper in an environment of ascetic bareness or simplicity. It needs a certain amount of generous enjoyment — sensuous, emotional and aesthetic — of the richness of life for its progress. So the ethical discipline for the businessman or the corporate world has to be based not on an ascetic self-denial, but on values like honesty, harmony, beauty, justice, fairness, mutuality, philanthropy and charity.

So, the Indian thought held the view that we have to take into consideration not only the highest ideals of universal dharma but also the temporal dharma of the present stage of evolution and the unique swadharma of the individual or the community. This requires a dharmic insight which leads to a pragmatic reconciliation of the needs of the universal, temporal and individual dharmas. This insight develops by consciously cultivating the ethical and aesthetic sense and a purified rational or emotional intelligence free from gross forms of ego and desire like greed, violence, lust, excessive selfishness and overweening pride or arrogance.

In this dharmic perspective, integrity means for the individual, integration of the body, mind, heart, will and the dynamic faculties of action around some life-enriching dharmic values. Similarly for the collectivity integrity means integration of the material, economic, social and political life of the community around some cultural ideals which are in turn based on a dharmic insight. For a modern organization the focal point of integration could be what is now called in modern management thought as the Mission, Vision and Values. The Mission is a statement of the purpose of the organization. The Vision is what the organization wants to achieve or realize in a specific time-frame and the Values are the guiding principles for behaviour, action and decision-making in the daily life of the organization. In our dharmic approach, mission, vision and values have to be derived from a dharmic insight and they have to be aligned with the strategy, staff, system structures and procedures of the organization.

The Spiritual Dimension

But to realize the highest level of integrity, we have to go beyond the dharmic to the spiritual dimension. The dharmic integration prepares the individual and the collectivity for this next and the highest realization of integrity which can be achieved only at the spiritual level. This spiritual evolution begins only when the need for it arises in the individual and the collectivity. Is there such a need in the corporate world at present? Moreover an enquiry into the spiritual dimensions of integrity may take us into the metaphysical realms. How far such metaphysical discussions are valid in business? First of all there is at present an increasing number of people in the corporate world who are seeking for a spiritual fulfillment in work and life. They are asking existential questions and are already reading philosophical and spiritual literature. This higher aspiration emerging in business is mostly private, personal and individual. And most of them may not be willing to admit their spiritual aspiration or faith openly in public even when they may be putting into practice in their professional life. As Neils Due Jensen, Group chairman, Grundfos Management, Denmark, states, "Today a major share of manager in both private and pubic organizations would not admit if they were managing their organization from a background of spirituality -- although many would in fact do so unconsciously"(Jensen N.D, 2007).

So why not bring this higher aspiration, which at present remains suppressed, consciously and systematically into the main-stream of academic and professional thinking and practice in management? Interestingly, this is also happening in business and management. For example, the US Academy of Management has recently launched a magazine, *Journal of Management, Spirituality and Religion,* focusing on the higher aspiration emerging in business. This journal in its mission statement says: "The remarkable explosion of scholarship in the field of management, business, organizations and work provides the opportunity for more specialized interest areas. One area whose turn has come is that of Spirituality and Religion -- and their role in shaping organisations." This bringing of the higher aspiration from the private space to the public domain of scholarship will do a lot of good to the well-being of the corporate world. For, as the well-known psychologist Carl Jung has said that one of the major causes of psychological disorders among the people in the west is the suppression of the religious aspiration by the secular and scientific mind of the west. So let us not shy away from the spiritual or philosophical in management thought.

The essence of integrity is truthfulness. So to realize the highest level of integrity we have to integrate our whole being around the very source of truth within us. As we have mentioned earlier, most of the spiritual traditions and teachings of the world agree that there is a spiritual element or divinity, soul or spirit in every individual, which is the source of all higher values and aspirations in man. According to the Indian spiritual thought, this spirit or divinity within man is the deepest and innermost truth of our being, beyond our body and mind, beyond even our ethical and aesthetic being. This indwelling divinity or soul is an immortal spark of the universal and the eternal Truth.

In Indian philosophy the term used for Truth is "*Sat*" which is the spiritual essence of all that is and that by which all exists the soul or the spirit in man is made of this spiritual substance of *Sat*. So, in this Indian spiritual conception "Truth" is not merely ethical honesty. To be truthful in a spiritual sense is to integrate our whole being -- our body, life and mind and all its faculties, -- around the spiritual centre in us, which is the truth of our individual being and the source of all higher values. This is the highest level of integrity. We can now understand why the Mother of Sri Aurobindo Ashram defines *Sincerity* as: "To lift all the movements of the being to the level of the highest consciousness and realization already attained. Sincerity exacts the unification and harmonization of the whole being in all its parts and movement around the central Divine Will" (The Mother, 1972).

But what is this Divine Will and how to know it? The Divine Will is not what is ordained in the Scriptures through right understanding and practice of scriptural injunction are a great help in our spiritual progress. In a spiritual perspective, the Divine Will for the individual is the inner divine guidance and impulsion of the spiritual element in us. How to know this inner guidance of our soul? It is a long, difficult and arduous discipline, full of perils and pitfalls, like for example mistaking the voice of our own mind and heart or some lesser powers of the subliminal mind as the Divine will. But however hard and difficult it may be, every individual at a certain state in her evolution, has to make this journey if she wants to realize her highest potential. But how to realize this spiritual integration? What is the path? The main principles of the path may be briefly summarized on the following lines:

- Progressive purification of the mind and heart from all forms of ego, desire and attachment and rejection of all negativities like greed, violence, jealousy, and in work and action, renunciation of the fruits of action,

- Constant and vigilant self-observation or mindfulness which is very much necessary to become fully conscious of what we are made of, detect and reject all contradictions and self-deceptions within us and unify our being around our central ideal, principle or value which we want to realize,

- Consciously cultivate dharmic values which lead to peace and harmony within us and the surrounding environment like kindness, generosity, compassion, service, tolerance, understanding, non-judgemental attitude, patience, forgiveness,

- Constant Practice of mental stillness along with peace and equanimity under all circumstances,

- Developing the capacity for introversion by which we can enter deep into our inner being and come into direct contact with our soul.

Is this ideal and discipline a little too high and difficult for people in the corporate world? Is there anyone in business and management thinking about or practising this spiritual ideal in the corporate world? Stephen Cowey comes very close to this spiritual ideal of integrity when he says.

"To me spirituality is three things. First of all you are dealing with the whole person. That includes the person's spirit or soul. You cannot separate their body or their mind or their heart from their spirit because they are all so interrelated and there is a synergic relationship between all the four dimensions of our nature. Another dimension would be that you are dealing with principles that are universal and timeless— certainly principles have a moral and spiritual foundation but no religion has a patent on them —" (Cowey S, 2007).

And Ramon Olle, President, Epson Europe, Netherlands states:

"When your leadership is founded on a value and belief system that consider the person as a total unity of the spiritual and the material, you cannot segregate which part of your daily activity is which and just consider one side of your total integrity" (Olle R, 2007).

And most of these spiritually inclined leaders in the corporate world are probably following some form of spiritual discipline. Peter Pruzan and Kirsten Pruzan Mikkelson in their book *Leading with Wisdom* which contains interviews of 31 corporate leaders from 15 countries who are making the attempt to lead from a basis of spirituality, state: "Most, not all of the executives had some kind of systematic spiritual practice — Meditation was a practice mentioned by a large number of the leaders" and quotes Niran Jung, CEO of Institute of Human Excellence, Australia: "I go to meditation retreats,— Meditation for me is throughout the day. It is being mindful."(Pruzan P, Mikkelson K.P, 2007) The other spiritual practice, which was mentioned by many executives interviewed in this book by Pruzans, is "looking and listening within." As Ricardo B. Levy Chairman of Catalyca Inc. USA, explains: "learning to quiet my mind and get into my deeper inner self and from that place listen to the voice of God, to give me the signals of my path" (Levy B, 2007).

We have discussed so far the ideal of spiritual integration at the individual level. Can there be a similar integration at the collective level. A collectivity is coming together of individuals for a common purpose. So if we accept the presence of a spiritual element in the individual, then it would not be unreasonable to suppose that there is probably a dormant and potential spiritual dimension in the collectivity. This potential spiritual dimension becomes active under three conditions. First when the collectivity is formed by the divine Power with a specific spiritual mission; secondly, when the founders of the collectivity are spiritual personalities, who give a spiritual purpose and direction to the community; third when the collectivity in the course of its evolution gets spiritually awakened through spiritually inspired leadership. Thus, when the leaders and individuals in an organization practise and realize this spiritual integration within themselves, they will provide the focal point of harmony for the spiritual integration of the collectivity. For, integration of the individual is the basis for the integration of the collectivity. A spiritually integrated individual radiates a spiritual force of harmony which by its subtle, silent and invisible spiritual influence, releases a corresponding force of harmony in the collectivity. And when the leaders of an organization live according to the inner guidance and inspiration of the spiritual source of their being, they will provide the right system of spiritual ideals and values around which the life of the collectivity can be integrated at the highest spiritual level.

Conclusion

The concept of integrity can be viewed in an ethical, psychological or spiritual perspective. And in the corporate context integrity has an individual and collective dimension. The Indian concept of dharma provides a good conceptual framework for evolving values which can provide a focal point of integration for organizing the various parts of the individual and corporate life into an integrated whole, which is the highest meaning of integrity. But the dharmic integration is only a preparatory stage for a still higher, and the highest realization of integrity at the spiritual level.

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Blue -Collar Work-Force in Chemical Industry

Atul Kumar Srivastava, Mohd Nishat Faisal and Mangesh Chickermane

A lot of research has been undertaken on Total Quality Management (TQM) with special interest shown to various industries. However, hardly anything is noted with reference to the TQM of the blue-collar personnel in Chemical Industry. The present research relates to chemical industries in developing countries of Asia, carried out within the framework of TQM relying on secondary data. The results, it is hoped, will help the practising manager in the field.

Under the scope of the research, performance of blue-collar employees means 'Operational Productivity' which is an ability of plant-associated blue-collar personnel (BCP) to give their best shot when they are motivated, cared for and respected by their white-collar peers on the other side of the (plant) fence. Despite a well-designed plant, problems still occur which keep BCP from Production, Inspection and Maintenance (PIM) on their toes 24/7/365. Though each and every person in an organization is expected to perform his task to the best of his abilities, certain jobs are more critical than the others with respect to their impact on the operational productivity in a chemical process company.



Mr.Atul Kumar Srivastava, Senior S.E.Q. Systems Specialist, Safety, Environment and Quality (S.E.Q.) Department, Qatargas, Qatar, E-mail: asriva@qatargas.com.qa

Dr. Mohd Nishat Faisal, Department of Business Administration, Aligarh Muslim University, Aligarh-202002, India, Email: nishat786@yahoo.com

Mr.Mangesh Chickermane, Lead Auditor and Trainer, QMS / EMS / OHSMS / RMS, ABS (American Bureau of Shipping) Quality Evaluations, Dubai, UAE , E-mail: mangeshdc@yahoo.com

Total Quality Management (TQM) is a revolution which is pervading all industries in modern times. TQM reflects endeavour of mankind to bring about continuous improvements on all fronts in their working systems to enhance their productivity (Garg, 2003). When TQM deals with improving performance levels of human resources, it is called Total Quality Human Resource Management (TQHRM) (Petrick and Furr 1996). Deming, Juran, Crosby etc are considered fathers of TQM in its different variations.

Though a lot of research work exists on TQM as applied to various industries, hardly any noticeable work is seen on exclusive application of TQM to the BCP in chemical process industries in either understanding their problems or making efforts to enhance their performance/productivity. The 'Military Civilian Model of Mutual Respect' has been used as the research theme in the present research to compare the BCP and WCP in chemical process industries.

The Hypotheses

The hypotheses are based on the concepts developed within the framework of TQHRM as a result of study of secondary data (literature survey and review) and are the culmination of two decades of interactions and observations by the researcher in the chemical process industries in developing countries in Asia. For the purpose of objectivity and measurability, an overall theme hypothesis and associated hypotheses have been formulated, based on various selected elements of TQHRM. In the present research, a hypothesis is a statement and is associated with similar questions in the research questionnaire. Similar questions in a hypothesis pertain to similar aspects of the TQHRM. In fact, questions are designed in such a way that they themselves are statements. If a respondent agrees on average with those similar 'question-statements,' it implies that he agrees with the associated hypothesis statement also.

A survey was carried out with 605 respondents (blue and white-collar ratio 2:1), having collective experience in 170 chemical process companies. The underlying hypotheses were tested at 95 percent confidence level with right-hand tail test involving Z-statistic (Kothari, 2004).

The hypotheses are not being reproduced here because the recommendations contain the accepted hypotheses one way or the other.

Research Design

Sampling Plan

Sampling Universe: Population of select chemical process industries in developing countries in Asia.

Sampling Unit: The plant-associated BCP and non-plant white-collar personnel (WCP) numbering appx 100,000 or more in the select chemical process companies.

Sampling Size: As per Sekaran (2003), a sample size of 382 is recommended for a population of 75000, and 384 for 1000,000.

In the present research, the researcher was fortunate to be able to get survey responses from 605 respondents with their collective experience spread over 170 diverse chemical process companies of mostly large and medium sizes.

Sampling Procedure: Non-probability sampling techniques such as judgmental and convenience sampling techniques have been employed to obtain the samples, and representative cross-sectional respondents have been approached to minimize any bias as far as humanly possible.

Questionnaire as the Research Instrument

The 'Opinion Survey' approach was followed. In order to gather opinions of respondents, the questionnaire as research instrument (Boyd, 2002) was basically used; covering (i) ticked and scripted answers through hard-copy postal mails (ii) ticked and scripted answers through e-mails (iii) personal interviews and telephonic contacts:

Questions in the Questionnaire were adapted from the following credible and validated sources:

§ 'PROSPER' Audit protocols on EHS&Q (Environment, Health, Safety and Quality) Management developed by Det Norske Veritas (DNV), Norway.

§ Quality Management Audit protocols on ISO 9002 and ISO 9001:2000 used by internationally established and reputed audit organizations such as Bureau Veritas, DNV, Velosi Certification, and American Bureau of Shipping.

In addition, the questions and questionnaire were validated by the following experts:

§ Co-author Mr. Mangesh Chickermane who himself is an authority on Quality Management audits and the related questionnaires. Please see his profile under 'Authors.'

§ (Late) Professor S.M. Ozair, Department of Business Administration, Faculty of Management Studies and Research, Aligarh Muslim University (AMU). He was a very senior professor in area of Human Resource Management.

The researcher himself is an Internal Auditor on Quality Management for several years. Please see his profile under 'Authors.' Questions were adapted and developed from personal observations, interactions and interviews with the concerned employees and managerial personnel during his employment, deputations and informal visits to the companies.

The questionnaire was also successfully tested for reliability during the Pilot survey.

Suggestions and Recommendations

The following is a series of suggestions and recommendations derived from the present research. They are based on analysis and interpretation of the accepted hypotheses. They have been supported with substantiated discussions, wherever needed, to clarify the points. The discussions and explanations are also partly based on the convincing arguments put forward by respondents in subjective section of the questionnaire within the context of these hypotheses. It is not necessary that all points apply to all companies. The beneficiary companies and individuals in the chemical process industries have to be selective on these points as per their needs within the scope of the research.

1. **The operational criticality of the blue-collar personnel (BCP) in plant should entitle them to an overall favourable treatment as we do for 'soldiers on the border' in line with the research theme:** BCP in the plant have some similarity with the soldiers at border because of their hard life and critical job. Make preferred motivation for these plant personnel desirable for positive and enhanced operational productivity. Management should consistently recognize the capabilities of the BCP and let them have a sense of alignment, authority, self-esteem and rewarded-commitment. This way, the impact of TQHRM on operational productivity in chemical process industries would be positive within the scope and the theme of the research because it will attract the commitment of BCP personnel with soldiers' intensity. Due to their excessive dissatisfaction, it may result in 'soldiers' mutiny.'

2. **Establish a culture of mutual respect between the BCP and WCP:** BCP as 'soldiers' need and deserve special respect. A small 'extra' motivational gesture by WCP towards BCP can do wonders in enhancing the operational productivity. BCP become very sensitive to being ignored because of physically and mentally stressful nature of their jobs. They depend, to a great deal, on activities and prompt services of the WCP.

Management leadership has a crucial role in spreading this environment of mutual respect and reciprocal accountability as well as in establishing visible motivation through TQHRM workshops, educational communication on 'mutual respect' and internal customer satisfaction. Such a culture of mutual respect would be based on recognition of functional criticality (e.g. operational productivity) within the scope of this research. Plans of the company on this 'cultural shift' as communicated by the top management would give it a different level of sanctity and create more willingness for both the WCP and BCP groups to put in extra efforts, tend to function as family, display less internal rivalries and be the advocates of company's products and services. Management should be more visible and transparent to catalyze this cultural transformation. Mutual respect should not only be in minds but should also be visible in the form of practice.

Problems do arise due to lack of appreciation of what others are doing. The above orientation and cultural shift will enable the WCP to provide services with positive attitude to the BCP (the 'soldiers'), with a sense of belongingness and team spirit. In return, the BCP would toil hard to save even an hour of lost production and hence win the 'war' against the competitors.

A significant percentage of all respondents (about 56 percent) and more than 80 percent of BCP came across situations when non-plant employee ignored plant-associated BCP when the latter needed assistance urgently. This must be noted.

The value system, morale and commitment of the employers towards its employees and society at large do play a vital role in building the culture of the organization. The huge profits of an organization do not speak by themselves that the organization is good unless one looks at the value and morale of the organization, and the means followed to earn the profits. The employees and public at large do watch closely the morale and value system of the owners/promoters and the top management.

In order to promote the sense of belonging with the company amongst the plant personnel, there should be regular commendation and encouragement for the plant personnel so that they do not feel that the power lies only in the air-conditioned rooms and not in the heat around furnaces or in darkness of the equipment. That non-plant WCP who have been supportive with their work for the cause of plant and the plant personnel should also be appreciated.

'Plant-associated BCP deserve a similar respect, attention and motivation as do the soldiers at the border. In other words, the management leadership should create an environment for the culture of self-respect, mutual respect, team spirit and internal customer satisfaction between the BCP and WCP.' This culture brings about the feelings of togetherness and sense of belonging such as 'my company and my work.'

3. **Recognize and Compensate adequately the tougher Working Life of BCP:** It is proven beyond doubt that blue-collar personnel in chemical process plants have very rough and tough working life-styles. Hence, they are qualitatively comparable with soldiers' life-style in spirit but on a lower scale. Hazards faced by them are toxic, combustible and explosive chemicals and vapours, deafening machinery noise, harmful radiations, adverse weather and intricate work locations, among other things.

Though a significant percentage of WCP on average are not aware of plant hardships because of isolation from plant workplaces and working situations, an overwhelming majority of BCP on average claim that they are aware about some plant-associated employees being hyper or normally stressed, angry or irritable as a result of extended plant-associated career. To take better stock of this reality, WCP should be oriented in the plant for a few months while doing their basic functions there and interfacing directly with the blue-collar personnel at site or near workplaces. Thus, the entry of white-collar support personnel into a company should be with opportunities to observe the needs of the plant-associated personnel at their work.

BCP have to be in time at workplace so that plant equipments are not left unattended either when the plant is running normally or is in the 'upset' condition because these personnel are closely interdependent. Unplanned casual absences in the plant are viewed unfavourably because they result in tight manpower situation which may adversely affect production targets and safety. Due to such absences, some of the existing personnel from the current shift/assigned duty continue working overtime on critical jobs.

During vacation time when schools are closed and colleagues have gone on vacations, extra-hour work or emergency requirements may be more rampant. Company owes the plant personnel something 'decently extra' compared to the non-plant WCP for overtime work because of hardship and regular exposure to the occupational health and safety hazards in a running plant.

Junior BCP from PIM who are called additionally on emergency duty after compromising with their personal and social life are normally paid over-time compensation only on standard hourly basis. Their timely help keeps the plant running and profit of the company soaring. Thus, their over-time payment rates should be higher than for office-environment white-collar jobs such as Administration, Finance, etc.

Because more and more bright, highly educated and professionally well-qualified senior personnel are required for blue-collar jobs to run highly sophisticated large-size plants, they must be compensated through extra remuneration-means such as perks, allowances, spot awards, recognitions, regular gifts, additional increments and promotions for missing all personal, family and social opportunities which WCP enjoy while working during normal day time in comforts of offices. Higher age group (50^+ years) of plant-associated shift-personnel should be accommodated for general shift (day duty), wherever possible. It is good to take some hard decisions. Human resource in the plant should be treated with brain as well as with heart.

The above measures may compensate for an out of balance situation that 'plant-associated BCP have in respect of a tougher working life compared to non-plant WCP.'

4. **Missed opportunities of BCP must not be ignored but carefully addressed:** If planned vacation had to be delayed or cancelled for a BCP, human resource department must investigate and take appropriate measures to avoid such recurrences. A cancelled or delayed vacation deprives the company of freshness of an employee and, hence, adversely affects the operational productivity.

Training department must investigate circumstances leading to a training missed by an employee, particularly a BCP in context of operational productivity. If the root-cause is tight manpower situation, HR dept should plan to recruit additional personnel. If the root-cause is poor planning by employee's department or administrative delays, corrective actions must be taken to avoid such repetitions. A missed training opportunity could be very expensive for the company sooner or later because it may deprive the company of certain skills which may be required during regular or emergency plant situations.

It is seen that BCP who can not leave the plant normally miss the address by a VIP (very important person). PR dept should take special care to expand general awareness of BCP through special VIP visits and videos of the missed VIP addresses.

Though a significant percentage of WCP on average are not aware of it, an overwhelming majority of BCP on average claim that plant-associated employees miss opportunities on vacation, training and VIP visits. To close this vacuum of feedback, WCP should be oriented in the plant for a few months to gain more insight into the plant realities.

The absence of above measures will deeply engrave a certification that 'plant-associated BCP miss opportunities in professional and social spheres compared to non-plant WCP.'

5. **Reduce Psychological and Social Barriers Between the Two Groups:** Every human being in this world wants happiness and satisfaction in life. When BCP ('the soldiers') begin to perceive beyond a tolerance limit that their toiling in heat and dust (adverse physical atmosphere) is being enjoyed by the WCP who care little about the former, this results in psychological and social barriers and distances between the two groups. This results in mistrust and frictions between them, including dissatisfaction of BCP with their own lives. The 'soldiers' start feeling relegated to their fate with no hope for any resurrection and revival, and thus ultimately reconcile to 'the ruler and the ruled' situation with no team-spirit or sense of belonging or motivation. Based on the survey responses, the following negative psychological and social barriers along with some corrective recommendations are presented:

§ BCP in plant keenly observe what is happening on the other side of the fence and start feeling frustrated when they think that some non-plant WCP enjoy the life in comforts of AC without any meaningful support to the 'soldiers' (plant-personnel) who work hard and sweat in the heat and discomfort of the plant-environment.

  To alleviate such negative psychological and social barriers, WCP should be visible once in a while in the 'field' (outdoors) amongst the BCP, enquiring if the latter are facing any problems or if the WCP can be of any more service to them. Such gestures automatically repel the feelings that WCP always enjoy the office comforts.

§ Non-plant WCP sit in administrative building, close to the top and middle management. If one is displaying one's work there, one will get noticed by the management easily. Due to the proximity with 'powerful WCP,' when a white-collar employee gets favour or undue recognition for minor or much simpler things than is normally done in the plant, the BCP may feel bad and start thinking that the systems of performance appraisal, recognition, rewards and promotions tend to have hard parameters/standards for the plant-associated BCP and soft parameters/standards for the non-plant WCP. Majority of plant-personnel feel so because plant-associated managers have seen tough physical standards of plant-life which they unknowingly pass on to their staff as well. BCP do not consider the system of performance appraisal as comparatively fair between the two groups.

To address such issues, WCP must exercise utmost care. Undue growth of an incompetent white-collar employee may be highly sensitive and detrimental to the operational productivity. In fact, any extraordinary treatment to a white-collar employee should first be discussed with the representatives of BCP vis-à-vis repercussions on the plant side. If it is found during this 'review' that the action of the concerned white-collar employee was certainly extraordinary in interest of the company, such a white-collar employee must be treated in an extra-ordinary way.

§ At times, some plant-associated people feel that they are just working mechanically with no interest or involvement in the company affairs because their efforts and ideas are ignored. This aspect is called connivance, resulting from inactive leadership. Over a period of time, it becomes established that certain people are meant to work whereas others are meant to reap the harvest from others' hard work. It may adversely affect the condition of plant machinery maintained by a pack of stoic BCP whose morale may be at the lowest ebb.

This issue can be addressed by reaching the psychological depths of blue-collar personnel. Top managers, middle managers and supervisors should regularly heed and recognize the suggestions and involvement of BCP in the company affairs. BCP even at the grass-root level must be appreciated visibly for their efforts through company's media means such as intranet, notice boards, magazine, circulars, company-wide e-mails etc.

§ Some plant-associated people wish that they should better take a white-collar non-plant job in a profit-making chemical process company because all personnel are more or less treated and compensated equally irrespective of their proportionate contribution to the operational productivity.

This can be avoided through a more practical compensation policy. Gone are the days when compensation was accorded based on grades and number of years of employment in the company, irrespective of nature of the job? Job engineering, job description and job evaluation have become highly specialized now. In the modern age of 'cut-throat' competition in the process industries, a relatively young blue-collar highly qualified man on the plant side should be eligible to earn more than even a white-collar clerical-type old manager on the non-plant side if the job of the young man is to maintain a plant system whose breakdown may cost the company immensely every few hours. This is called a TQHRM way of compensating an employee to enhance company's operational productivity.

§ Possibly because of working routinely with a monotonous drudgery, BCP don't possess as much communicative articulation as is enjoyed by WCP normally. The same is true with leadership projection abilities.

The BCP need a little bit of more effective communication and leadership qualities so as to enable themselves further to apprise or persuade the management about their problems or expectations. This can be achieved by encouraging them to attend more of communication and leadership workshops or by sponsoring them to be members of communication and leadership clubs such as 'toastmasters clubs' or 'round table clubs' which train the members in effectively communicating the problems and solving them through the team-building and leadership efforts.

§ The above psychological and social barriers ultimately develop a kind of alienation (separation/ distance) between WCP and BCP working in their independent isolated domains (kingdoms) without much visible cohesiveness and team-bond.

Though a significant percentage of WCP on average are not aware of these existing barriers, this problem can be solved by encouraging both groups to spend more time together professionally and socially so that they understand each other in a better way through positive ambience. Conducting more awareness seminars and cascading sessions to both the groups will reduce the social gaps and psychological barriers, and increase the operational productivity.

With ongoing implementation of online computerized workflow systems, most of personnel claims and services are cleared over net with a click of the button without any physical interaction between the BCP and WCP. This computerized age is causing more isolation between them. Physical altercation is not there but ignorance of others' nature of job has increased, and hence the policies for the BCP by the WCP are adversely affected sometimes. The role of the management is critical. It should break the barriers and build bridges between the various functions in a proactive manner, based on the unique character and history of the plant through awareness sessions, workshops and write-ups on intranet about job profiles of BCP.

The above measures may alleviate a stigma that 'plant-associated BCP suffer from psychological and social barriers vis-à-vis non-plant WCP.'

6. **Adopt factual and practical approach to policy formation:** Policies affecting all company personnel are framed by some individuals. If these individuals do not have detailed exposure to the 'plant realities,' they tend to produce the policies which hamper the 'operational productivity,' let alone motivate the plant-associated BCP. Hence, there must always be adequate representation of plant-associated BCP on teams formulating policies and procedures affecting human resources. Development of HR policies should not be work of purely office-based HR department relying on secondary data from the industry but of an intra-company multi-discipline team who must focus on micro-activities and micro-sensitivities of personnel and devise methodologies for compensation, promotion, appraisal, allowances, awards etc, suiting to specific segments and scenarios of the company (i.e. factual and practical approach). Furthermore, participation of senior workers in 'problem-solving' management teams should be encouraged in extremely deserving cases.

As per one survey question, a sizable number of respondents (even though less than 80%) on average accept that they came across misconception of some non-plant personnel who think that 'plants are automatic, and raw material enters one end and comes out as a finished product from the other end, with the result that plant personnel have nothing much to do.' If a person with such a misconception gets a chance to participate in formulation of compensation, promotion, appraisal, allowances and awards policies or procedures, it is highly unlikely that the plant-associated BCP may get a fair deal.

Some ignorant, though powerful WCP, think that the process plants start producing automatically simply by pressing a button. Factually, even the best among automated systems in the process plants do not work on their own. They have to be programmed, executed, monitored and corrected in case of any deviations. The term 'automation' is basically misconceived sometimes as a substitute for human resources, whereas it only eases the physical hardship to some extent and does not eliminate the need for human beings. Plant personnel ensure continuous availability of products through effective, efficient and reliable 'production operations, inspection and maintenance' (PIM) of the plants. They are continuously supported by blue-collar 'safety, fire and rescue, and security' personnel (like 'paramilitary forces') on the plant site.

The key to motivating plant-associated personnel is adoption of pragmatic approach to the practice of management by involving them and listening to their experiences and suggestions in formulating policies, arriving at decisions and implementing these decisions, especially the ones that have direct impact on the BCP. The uniformity of approach in implementation of policies and in administration of compensation and rewards is an important factor in motivation.

While framing remuneration and compensation policies, it is better to involve those who have extensive experience of working in the plants or plant situations and who know how things move in the process plants.

'Policy formulation will affect the plant-associated BCP more positively in a factual and process-based way when their representatives have a significant and prominent position / voice in the company compared to non-plant WCP.'

7. **Take Performance Management and TQM in spirit:** Performance management aspects are very sensitive to the personnel. A casual approach to them may weaken the team spirit in the company whereas utilizing them in a visible and practically motivating way can make critical links in the manpower-chain stronger. 'Total Quality Performance Management should be a balance of practicality and equitability.' What is due to the BCP ('soldiers') should not be lost due to politicization and handiwork by those in power.

Performance of plant-associated BCP should be looked at from a different yardstick—a respectful yardstick with which 'soldiers' are treated at the border—a yardstick which establishes 'operational activities' as the final culmination of planning which WCP normally do. The following bullets draw attention to some salient issues of performance management and TQM, while suggesting some remedial and proactive measures based on findings and conclusions of the present research.

§ Rather than being provident towards reserve manpower of BCP, the axe of human resource benchmarking falls unjustifiably on blue-collar personnel because of clever justifications, misuse of power and skillful presentations (within the comfortable environment) of the WCP who sometimes fail to compare apples with apples when referring to the manpower benchmark reports in the industry. The WCP dexterously try to retain their jobs. The benchmarking turns out to be a number game or a shortsighted profit consideration, rather than a provident long-term vision for keeping the experienced BCP as emergency back up for unforeseen plant breakdowns. It has been seen that the majority of white-collar decision makers who have no detailed exposure or background of the plant take hasty decision based on the current financial balance-sheets or the profit projections. They shelve the BCP during good times of the company and desperately start looking for manpower during crises in the plants. They, then, are forced to spend exorbitant amounts of money and resources to find contractors who are not appropriately and adequately trained, experienced or skilled and are difficult to find. Furthermore, these huge sums of money paid to contractors could have been saved if the BCP had been retained or even lent out to other nearby companies and called back when necessary. On the contrary, if decision makers form the majority from plant background, the company blossoms for a very long time.

During manpower crisis, simply replacing the people like consumable commodities from the market shelf will not achieve the same efficiency as before. Experience and cultivation of work-culture in a company are the long-term and slow-process serious matters. Those managers who simply let people go either do not know TQHRM or are bound by some compelling reasons such as short-term profit-making.

Salary, compensation, rewards and other benefits should be given at a higher rate to the employees than in the other benchmarking companies so that they can feel proud of their organization and enjoy working.

§ An overwhelming majority of blue-collar respondents on average claim that the systems of performance appraisal, recognition, rewards and promotions tend to have hard parameters/ standards for blue-collar plant-associated personnel and soft parameters/standards for non-plant WCP. Further, these personnel do not consider the system of performance appraisal as comparatively fair between the two groups. However, hardly any white-collar respondent on average accepts it. This indicates presence of miserable apathy and deplorable lack of empathy and sympathy between the two groups of people. This also means that an overwhelming majority of white-collar respondents are not aware of the plant realities in which BCP have to work. White-collar support groups should be evaluated by the quickness of response to address grievances or job-related calls of the BCP (the 'soldiers'). Feedback of BCP regarding the work-approach and quality of service provided by the non-plant WCP should be taken into account while providing promotion to non-plant WCP.

§ A closer and periodic performance appraisal throughout the year rather than a year-end formality attaches a sense of importance and belongings to workers. The OMS (Objective Management System) and PPMS (Periodic Performance Management System) should be looked upon as opportunities to recognize and award the individuals for their personal contributions, and the groups of individuals for their viability to the business of company. HR should always verify bad opinion or suggestion coming from a supervisor before taking any corrective actions. Plant-associated BCP are such an indispensable and irrefutably viable group which realizes the company vision and mission through operational productivity. Performance-related training requirements and other growth-related recommendations must be fulfilled in a systematic way at the earliest rather than just adoring the pages of the appraisal reports. Re-training and re-positioning has become a key issue now-a-days. Lack of attention to these aspects leads to employee redundancies which results in insecurity and has become a key issue for demotivation.

§ 360-degree feedback system has been very helpful in many organizations. It allows junior personnel to freely evaluate their superiors. Similar systems such as regular internal customer surveys employed suitably for the plant personnel can be helpful to take care of several plant / non-plant personnel issues.

§ An internal publicity campaign by forward-looking companies that they practice the culture of mutual respect and TQHRM will certainly pay off through the enhanced operational productivity. Training to HR, Admin, Accounts, Materials/Supply and other white-collar support personnel by the experts from hospitality industry will help them better understand the psychology, human relations and behavioral requirements of the internal customers (i.e. plant-associated BCP –'the soldiers'), and, thus, make proactive gestures. Proactive gestures include but not limited to: (i) HR department sending timely greetings on birthdays, date of joining, etc and reminding for the renewal of government documents/ licenses, etc; and (ii) the Accounts department paying surprise salary advances etc. This will provide motivational personal attention as well as bring more closeness in the relationship between the two groups. Personal notifications and reminders will improve productivity; the reason being that the BCP will thus save time, attention and energy, otherwise needed to be set aside for resolving personal matters during stressful physical activities in the plant (i.e. PIM). In absence of such goodwill supports and gestures, it may be a disguised invitation for an accident to the plant BCP working with dangerous machinery in the challenging physical environment with double-minded stress.

§ As is the nature of soldiers, they feel motivated fast if their work is appreciated and recognized. The same is true with the BCP at all levels who spend their time under stress and physical discomfort. Their suggestions, however minor, carry a lot of practical significance. Those companies which use centralized Improvement Suggestion Reporting and give recognition to the innovative suggestions of the BCP, including timely implementation, are seen to excel in operational productivity.

§ Taking a lead from some of the above bullets, we can say that the employee empowerment, employee involvement and supportive work-culture aspects of TQHRM provide a sense of boost to the BCP to enhance the operational productivity. Though it also applies to the WCP, the scope of research is focused on operational productivity of the process plants in chemical process industries.

8. **Rewards and compensation should be more catalytic to operational productivity:** Gone are the days when salary compensation used to be uniform as per the grade of an employee irrespective of the departmental placement. A goldsmith can not necessarily mint gold for himself, and a banker can not keep all the cash for himself. They have customers to look after. Similarly, HR, Finance and other associated white-collar departments which have a greater say in compensation and rewards policies for the employees have some obligations to fulfill with respect to internal customer satisfaction. Their job is better served if they have personnel from the plant background for consultations. 'Plant-associated BCP deserve significantly more financial compensation compared to the parallel grades of non-plant WCP.' The factor of physical and mental work should be accounted for more considerately and practically when the management is fixing salary or any type of financial allowances. Furthermore, the reward and compensation policy should be implemented in a timely manner to have any effectiveness. The policy of reward and compensation should be transparent so that personnel at large know for what reasons 'others' are being rewarded/ compensated so that future outcomes/effects are more productive.

If we do a micro-analysis of life-profiles of individuals, we find that those children who are meritorious, hard working and creative normally turn out to be good engineers and scientists. It is normally believed that the weaker or carefree students generally take to humanities and non-technical lines. There are always exception in both categories with respect to objectives and results but this micro-analysis is generally accepted. However, when the blue-collar meritorious technocrats and scientists find later in their industrial professional careers that they are being ruled by the white-collar administrators (from so-called 'weaker student group' during childhood earlier), this leads to mental agony and dissatisfaction. The blue-collar technocrats also suffer from professional syndromes such as 'under-paid,' 'being ordered,' 'it was good to study accountancy rather than engineering' etc. In short, all such aberrations should be adjusted or at least minimized by more appropriate 'rewards and compensation' policies for the BCP who have struggled early in their life to get technical qualifications. This revised favourable treatment will thus prompt current generation of children to study hard in technical and scientific fields because they would thus be promised to be well-paid, recognized and respected.

The management in chemical process industries should come up with innovative and encouraging salary, remuneration and rewards schemes to attract, retain and motivate the plant-associated personnel more and more. Plant-associated personnel deserve some extra percentage on their salary, bonus and incentive due to their direct impact on operational productivity and profitability of the company. SMART objectives (S-Specific, M-Measurable, A-Agreed upon, R-Realistic, T-Time bound) for plant personnel should give more weight to operational productivity at optimum cost so that their salary increment is tied more proportionately to the smooth volume production and the profit.

Implementation of employee ownership which entitles employees to getting dividends in proportion to their hard-work entailing company profitability should enable plant-associated personnel to get more shares compared to the non-plant personnel. Even though only a small fraction of WCP on average accept it, a significant percentage of BCP (94 percent) on average recommend it.

An internal publicity campaign by forward-looking companies that they motivate technocrats through preferential rewards and compensation policy will certainly pay off through enhanced operational productivity by attracting dedicated and highly qualified plant personnel. This will also indicate that activities in such companies and the associated costs do focus on core business of operational productivity involving 'PIM.'

It's actually human psychology to look for reward for any extra effort or hardship put in. Rewards and compensation will be more effective for operational productivity if sufficient funds are allocated for this, meaning thereby that the focus of company expenditure should be less on non-productive avenues and more on core business of operational productivity involving 'PIM.' 'Take Away' salary of personnel should be partly fixed and partly variable. The variable portion of the financial compensation should be through the immediate supervisors and managers who will compensate the employees regularly through spot-awards for specific out-of-turn jobs well done which were not envisaged in normal job description or the annual objectives.

Some examples of direct and indirect rewards and compensation to BCP could be **(i)** Preferential treatment for family accommodation policies, children education assistance etc **(ii)** The rotating shift personnel should have more leaves **(iii)** Since those working in irregular shifts or responding to emergency duties are not able to catch up regularly with welfare measures for their families on health, festivals, children's education and growth etc, company's HR representatives should support such employees and their families in a proactive anticipatory way, such as by visiting employees' homes and asking if any problems exist. **(iv)** Salary-grade of plant-associated BCP should be at least one grade higher than their white-collar counterparts on the non-plant side (except some special deserving cases for the latter). This suggestion is based on the generally accepted social premise that those students who are bright and hardworking academically ultimately join professional technical colleges offering grueling technical education. Now, ultimately, if this long student-phase of hard work and distinction does not entitle better payment to a technical and blue-collar plant employee than to a white-collar employee who grew up in the company from a clerk or record keeper position (and who did not do well during academics), society will lose faith in pursuing higher education. **(v)** Preferred treatment for rest periods while preparing work schedule. **(vi)** Plant and non-plant personnel should have separate promotion policies. If plant personnel get promotion after 4 years, non-plant personnel should get it at five years minimum. **(vii)** Special risk/ hazard allowances such as radiation allowance for radiation protection supervisors who closely monitor radiation levels during industrial radiography to check the condition of the plant equipment and the piping; diving allowance for company divers and dust/smoke allowance for those inspectors who enter the hazardous equipment etc, in addition to their flat rate grade salary. **(viii)** Night shift allowance as night duty disturbs the sleeping pattern and affects adversely the general health of the BCP. Similarly, shift allowance should not be of token value but substantial because the shift-people compromise with their health. **(ix)** Preferential company investment schemes/ company shares **(x)** Bad weather allowance by the plant supervisors as an on-the spot token incentive **(xi)** Risky confined space entry allowance **(xii)** Emergency response allowance.

There may be some apprehension that blue-collar supervisors may misuse the additional awards and compensation system for themselves. There is a two fold answer to it — a) these allowances are situational and negligible when compared to the huge amount of saving and service a blue-collar awardee might have done for the company. These allowances, though insignificant in value for the company, mean a lot to an employee. b) If a prime minister says, "what about me?" the war will be lost. If a supervisor or manager says "What about allowance to me," he can not be a good leader or manager.

9. **Plight of blue-collar senior staff needs special attention:** At the top of the iceberg of problems associated with BCP is the plight of senior blue-collar staff such as engineers, field technical supervisors and superintendents etc. A bulk of grievances and plight discovered through this research also applies to this set of BCP. 'This special group of personnel also deserves value for their time vis-à-vis their counterparts on the non-plant white-collar side.' The following bullets highlight their cause:

§ There should be official accounting of extra hours worked by plant-associated supervisor, engineer and similar senior staff, particularly when requested by his supervisor or when required to respond to urgent unplanned jobs, so that he can be compensated. The value of time for all the employees irrespective of departments is the same. The time other than what is spent on the company premises or for the company purpose is the private time of the employees for their families and social engagements. It has been noticed that a majority of those in non-plant jobs (white-collar) have regularly available private time in evenings or weekends or holidays for their leisure because they normally do not have to do emergency work at their workplace during these private hours.

§ A plant supervisor/ engineer/ senior staff is an important link between the junior staff and the middle-level line management. Like a major or colonel on the battleground, he leads a group of 'soldiers' (fellow BCP). He faces a very tough task of keeping the soldiers' sentiments high against all odds. He is sometimes held accountable if a job is not done properly or delayed by his fellow workers unintentionally or intentionally. To ensure proper and safe conduct of critical jobs, he himself reaches the job-site during normal time (planned job) and during odd hours (emergency jobs).

It is better to recognize the fact openly as a company policy that the plant-associated senior staff such as engineers and technical supervisors/ superintendents are different in terms of their working conditions and other challenges, and therefore should be treated with due grace and be supported with 'extra' remuneration and compensation in proportion of their regular and off-hours work input. They get sandwiched between the requirements of the management from the top and the expectations of workers from the bottom. This really makes their life restless. It should also be officially recognized that these people are like prime movers in company's success story. These people normally come from well-educated section of the society. Thus, connivance with their plight may add to the simmering and expanding discontent of the overall blue-collar community (i.e. the hidden part of the iceberg).

10. **Recruit bright plant personnel:** With technological advancement, plant-associated jobs now require more sophistication of educational and professional qualifications, skills and training compared to the olden times when these jobs were looked upon as muscle-type not requiring high level of education and sophistication. Complexities in the plants with high commercial stakes can not be tackled without highly educated, meritorious, intelligent, healthy and hard-working blue-collar professionals ready to sacrifice their personal and social life to attend plant emergencies 24/7/365.

Management should attach high priority to relatively good compensation package for attracting educationally bright BCP. Such prioritization will encourage technical students to be attracted towards rough and tough jobs in the chemical process plants which enhance economy of a country. It has been seen and proven that industrial accidents take place because intelligent and genius people don't like to work in the fields as BCP because it neither carries prestige nor is so rewarding currently in general. Also, communication gap is more in the plant jobs because plant seniors feel de-motivated; even their extra hours are not normally recorded, let alone paying them their financial dues in proportion to the profit-volumes of the company.

It is worth encouraging more and more educationally accomplished professionally competent and preferably young personnel who have ability to look at things from fresh angle for working in the plant areas.

The instability of a company is evaluated by turnover of good employees and the amount of money the company has to drain to the outside consultants and contractors to meet the challenges during emergency situations in absence of good employees who are meant to man the plant-related departments. The lower is the turnover of the highly educated, accomplished and experienced BCP, the better it is for the long-term survival and enhanced operational productivity of the company.

'In order to attract bright, highly educated and hard working professionals to a relative hardship of high-tech sophisticated plant-life, an appropriate and attractive remuneration, reward and recognition policy should be employed as compared to the non-plant personnel to ensure sustained reliability of the plant and its production.'

11. Miscellaneous Suggestions and Recommendations

The following suggestions are derived from those majority respondents who were consistently passionate about the whole research theme and from the overall impression of the researcher throughout the research process, while being within the framework of the accepted hypotheses. Some points may appear to repeat but they contain more reasoning, logical thoughts and other important aspects:

i. **Share the compensation for a vacation/vacant post:** If some employee goes on vacation, business or training trips or quits the company, workload increases on the remaining peers through delegation of authority. It is seen that some companies are insensitive to increased workload thus created. Companies add hardship to an already existing stressful life of the BCP in such situations. Proportionate allowances must be given to the personnel left in the department for sharing the workload, totalling to the salary of vacation/vacant post. Such small incremental allowances will support the peers and boost them in already tight situations.

ii. **Timely implementation of discipline/punishment policy:** Those who are lax in discharging their responsibilities (e.g. internal customer service) should be dealt with in a timely manner. The policy of punishment should be transparent so that personnel at large know for what laxity others are being punished so that the future outcomes/effects are more productive. The research theme believes in TQHRM and does not propagate the punishment or blame policy but instead the Human Resource Accountability (HRA) policy. If HRA meets repeated failures with a certain employee, and all corrective and counselling efforts fail, such an employee should be shown that he is not immune to company's extreme actions such as termination.

iii. **Worker participation in management:** Have the elected representatives from plant-associated personnel take up the concerns of plant personnel with the top management and have a proper follow-up and transparency. In other words, have regular representation of the BCP of all levels in all management review sessions affecting personnel welfare.

iv. **Implement job rotation** within the same department or on inter-department basis. Migration from plant-associated jobs to non-plant jobs with opportunity to formulate HR policy may give a sense of satisfaction to previously BCP while letting them enjoy normal life with their families like others.

Those who have worked in the plant and subsequently take up white-collar jobs in other functions understand better the plant realities and provide more productive services at the right time. So, job-rotation/re-orientation/ re-assignment is a very good idea. Assignments from plant to non-plant jobs such as administration, job evaluation, salary-fixation and award monitoring of all kinds are some examples.

Some of purely administrative non-plant personnel, with no clue of working styles in the plant right from the beginning of their career, take the things lightly. They should be employed for short-terms only during the earlier stages of production and operation of the company till they are relieved by the long-serving/ aged plant personnel who wish to volunteer for non-plant jobs. Such migrated plant personnel serve their former plant peers better as they know where to go and when to go to address the problems of BCP, and thus enhance operational productivity through motivation. 'Birds of the same feather should flock together' as they understand each other's problems better.

v. **Keep a buffer stock of 'PIM' personnel**, in case of emergencies with production, inspection and maintenance functions. Contractors can not arrive at the eleventh hour. 'PIM' manpower reduction due to benchmarking may improve annual financial performance of the company but inability of the company to respond to even a small operational emergency jeopardizes the long-term image of the company in the market. Emergencies and their extent are uncertain in the chemical process industries.

vi. **Pay special attention not to scare away the trainees/ new employees**. Young recruits, fresh from college, join the companies with great hopes. Before these new employees experience the problems as BCP, HR Management should introduce them to the culture of mutual respect between the white-collar and blue-collar groups.

vii. **Lay more stress on improving employees' out-of-plant life** which is increasingly becoming demanding. Providing them with mental stress-relieving sessions and entertainment can help them tremendously on the job and off the job.

viii. **Pay attention to behaviour analysis and interpersonal relationship**, and use them for consolidating the culture of mutual respect between the two groups.

ix. **For very large organizations, consider outsourcing service departments** such as HR department, Administration, Accounting and Materials etc with some orientation from hospitality industry. This may result in better service performance from support departments and improve operational productivity by focusing more on the core business. This will also alleviate the dominance of those WCP who diplomatically churn away the cream which the company produces from the sweat and toil of the BCP. This will also reverse the misuse of pseudo charity-employment given under political or other influence to some incompetent WCP, basically in a technically profiled company.

x. **Ergonomic aspects of workplace are very important** to keep alertness of operational staff, and hence, due attention need be paid while designing/ refurbishing control rooms, furniture and lighting. A relaxed and stress-free state of mind of operational staff is critical; hence a meditation room need be provided at workplace to encourage staff to take short meditation breaks (designed like 'Stress Management,' 'Anger Management' and 'Art of Living' modules).

xi. **Pick up those plant-associated BCP** whose basic job has nothing to do with HR policies but who suggest innovative HRM ideas in the true spirit of helping the company. For example, a blue-collar employee with 20^{+} years in 3 companies has suggested promoting the deserving BCP to different layers of lower managerial cadre but retaining their working requirements at site. Another one with 23 years in 2 companies suggested homogenizing designations on the plant and non plant sides. ["*Operator in a particular grade should be called 'Assistant Gr-1(Operation)' and his peer in Non-Plant should be 'Assistant Gr-1 (Accounts) for example"].* Such possibilities are realized when centralized Improvement Suggestion Reporting (ISR) has a solid sustained backing of the Management. At a cost of a small award, company benefits even from a smallest possible idea.

xii. Use confidential BCP feedback through a third party agency as a good yardstick to measure their morale.

xiii. Award plant employees on achievement of certain number of fixed man-hours without any Lost Time Accidents (LTAs) or zero Accident Severity Rates (ASRs).

xiv. Reclassify and upgrade job categories to recognize the technology advancement in the plant operations. Publicize the acceptance of a marked shift in the requirements of qualifications from traditional 'low-skill low-education' to 'high-skill high-education' to do plant jobs.

xv. Promote employees to the higher positions in-house rather than outsourcing. Whenever an outsider is brought in for a vacant position, he consumes a significant time to familiarize himself with the company on several fronts. This entails a lot of hidden cost to the company directly or indirectly because the company spends resources to orient the new person. Attention and energy of the existing employees in a department is consumed to familiarize the new person, and sometimes this new employee may cause adverse consequences for the company simply because of his incomplete information on company's infrastructure and practices. If we spend a part of this all hidden costs and resources on development of the existing employees with potential, it may be more beneficial to the company in the long run.

There is more of a problem sometimes when a new manager comes from the outside. He spends several months to understand the existing management systems of his new company, then spends several months to invent or conceive his own ideas and systems, and then finally spends several months struggling to implement his own systems in the company before he leaves. This vicious cycle continues with arrival of new managers. This is more of a headache on the plant side because the BCP have to catch on with so much of management dynamics, in addition to their own day-to-day hard life.

xvi. Management should also be on look out for critical individuals in each function whose inputs matter a lot to the company, just like identifying critical functions responsible for operational productivity. Those trouble-shooting professionals, e.g. inspection and maintenance experts, whose supply is less than the demand should be given special compensation-package exempted from the general rules of the company.

xvii. Implement 'team concept' model where the WCP are clubbed with the BCP in various teams, and the rewards and benefits are for each team comprising both types. Also, invite the white-collar support personnel from HR, Finance, Materials, Marketing etc to the functional and problem solving meetings of the BCP in the plant so that the former get a first hand idea of realities of the plant and the stressful demanding situations through which plant personnel go. This will make white-collars to be involved with and appreciate the culture of operational productivity.

xviii. Standards of accounting and financial reporting should be amended to value and reflect the importance of human resources as assets rather than commodity.

xix. Make 'people management' processes applicable across the whole organization. It should not be limited to HR department or its units alone.

xx. Either strengthen the weak links in the chain or get rid of them because they snap the whole chain. The chain here is the company organization in the form of a value-chain, and the links are equivalent to the departments and individuals. The present research is focussing on the problems caused by the weak links which are supposed to support the strong links. Weak links on the white-collar non-plant side can be strengthened by awareness orientation, communications and behavioural workshops aimed to understand the plant-side realities. Similarly, the weak links on the blue-collar plant-side can be strengthened by training on technical-skills and by conducting behavioural and communication workshops. 'Drifters' must be converted into the 'Contributors.' If repeated attempts to salvage and strengthen the weak links fail, it is better to get rid of them, instead of converting the company into an orphanage or asylum of unfit people.

xxi. **Top leadership (Chairman, Managing Director etc)** should be mostly with individuals with technical background because a chemical process company is basically a technical company. A person at the top with technical background normally understands the plant-related constraints and realities better.

xxii. **Timely corrective action should be taken to address grievances;** otherwise the company may start cracking, particularly if the dissatisfied employees are critical to the company. Grievance redressal includes workplace conflict resolution. It is seen that the 'big surveys' are undertaken and then the 'corrective action plans' are left to rot. In other words, the complete cycle of 'Problem Identification—Proposition of Solutions—Finalization of Solution through Decision Making—Implementation of Solution through Resource Commitment and Mobilization—Feedback from Corrective Implementation' is delayed or irregularly materialized.

xxiii. **Carry out internal customer surveys** to check whether WCP, particularly not-so-well-educated administrative/secretarial staff, remember the assumption and expectation under which they were given employment in a technical (chemical process) company — that is to provide prompt service to the plant and its personnel (the 'soldiers'). Over the years, the employment gratitude is gone; rather a superiority of white-collar ruling class has emerged. BCP now live on the mercy of the WCP many of whom ironically have never or seldom seen the reality of a plant. Providing employment opportunities to non-technical personnel seems to have resulted in inefficiency, insensitivities, unaccountability and red-tape affecting operational productivity negatively. White-collar support staff should understand and accept the importance of the 'soldiers' and accordingly provide professional and social treatment to the latter. Lack of accountability due to employment protection under local government laws gives psychological problems to the 'soldiers.'

xxiv. **Consolidate the roles of plant-associated supervisors as a link** between the BCP and the WCP domains, including the middle management. This will require improving their communication and leadership skills, in addition to their technical roles.

xxv. **Chemical process companies need long-term concepts like 'invest in people'** and 'human capital appreciation' rather than 'treating human resources as commodities' available on market shelf any time.

xxvi. **Implement team-building exercise in the company through intranet.** Each person should be able to know what the other person does, how he looks (through photo) and where he fits in the organization chart. Such familiarity bonds the people together. In absence of such a facility on the Intranet in large organizations (particularly the multi-unit/ multi-state/ multi-national ones), people do not know each other which results in more and more alienation and isolation processes amongst the personnel. This widens further the divide between the plant and non-plant domains.

xxvii. **Reduce the gap between management standards and the realities.** There should be only one management standard and not many variations of it in different sections or the units of the company. It is seen that some sections or units, particularly white-collar ones, see more relaxed management standards than the others.

xxviii. **Train different layers of management and other emergency responders to cope with stress** during emergency/ crisis management because chemical process plants pass through emergency states several times (chemical and gas leaks, fire and explosion, multiple injuries or fatalities, toxic environmental discharges etc).

Since planning and execution for this involves a lot of input from those with plant-associated blue-collar background, it works better if BCP are kept in good humour and adequately satisfied.

xxix. **Implement an environment in which all BCP get at least** the same behavioural treatment as the WCP, if not a better preferential treatment as per their operational criticality. Also, maintain the same level of accountability in the company so that the administration and the other office staff don't get scot-free with official laxity. It's totally up to the top management how to manage it.

xxx. **Rely less on external HRM consultants.** They earn and run. Construct the internal HR policy infrastructure based on experience of internal human resources.

xxxi. **HR department should be staffed with a balance of non-plant and plant personnel**. While non-plant personnel are more skilled in government affairs, regulation and management ethos; the plant personnel are more familiar with the problems that the BCP face. Their joint efforts will form policies more conducive to the plant personnel.

xxxii. **Apply the principles of emotional intelligence:** Don't delay or deny the recognitions. The 'soldiers' are emotional. Emotions are seen even in children. Many grown-ups are even more sensitive to it. Use of 'emotional intelligence' by the management to recognize the BCP at the right time works as a catalyst to enhance motivation of these personnel.

xxxiii. There should be **good rehabilitation and relocation policies** for those plant personnel who have been rendered handicapped or medically unfit as a result of working in the plant (occupational illness and injuries).

xxxiv. **Implement 'spot-award scheme'** wherein employees are recognized immediately/on-the spot for their exemplary actions and ideas through some gifts, prizes, cash-vouchers or certificates on day-to-day basis. Budgetary allocation should preferably be more towards plant-personnel because of their direct bearing on the operational productivity.

xxxv. **Publicize regularly the outstanding achievers** on the Intranet and in the company magazine with a brief justification for the recognition so as to inspire other employees.

xxxvi. In addition to conventional appraisal of an employee by his supervisor, **introduce 'self-appraisal,' 'peer-appraisals' and 'inter-departmental vetting of appraisals'** in case of 'poor performers' (the drifters) and the 'outstanding performers' (contributors) to assuage sensitivities involved across the company.

xxxvii. Introduce **'team performance appraisals'** in addition to the conventional individual appraisal to boost the team spirit of BCP and WCP working together on specific projects.

xxxviii. **Treat contract personnel as part and parcel** of the company as far as spirit of human relations are concerned. Though contractual and commercial obligations can't bring them at par with company employees, blue-collar contract personnel are 'soldiers' too.

xxxix. **Lay special emphasis on BCP during plant 'shut-down' activities.** Though the plant does not produce during the 'shut-down,' plant personnel's workload multiplies manifolds during this period. They have to work consistently over extended hours under trying conditions. Any low morale or diversion of attention negatively affects the quality of inspection and maintenance activities, resulting in reduced operational productivity when the plant starts up to face breakdowns again.

It is desirable for the WCP such as those from Admin, Public Relations etc to visit the site and interact with the BCP so as to enquire about quality of services with regard to catering, transportation, family-care back at home or any other special issues.

Special 'shut-down' spot-awards for safety, hard work, innovative and constructive approach to work and for quality inspection and maintenance work will boost the morale of the BCP, resulting in better performance of the plant once up and running again.

xxxx. **Make TQHRM a way of life at the company.** Look at every aspect of activities from improvement point of view. Involve and empower every one including those at the bottom level of workforce in small problem solving teams. If certain actions are more desirable than others in interest of the company, some individuals should be more accommodative instead of being governed by individual prestige and egos.

Try to understand that **operational productivity is one very important pillar** on which the whole company rests. Ensure that this pillar remains strong. Ensure that the mortar used to bond the bricks of this pillar is of high quality. Here, in this 'simile,' the 'bricks' are equivalent to the plant-associated BCP ('the soldiers') and the bonding 'mortar' is equivalent to the white-collar support functions.

A father does not lose anything if he supports his son. A nation does not lose anything if it supports the soldiers at the frontier. A chemical process company does not lose anything if it supports the cause of the BCP 'whole-heartedly.' All are to gain ultimately.

Managerial Implications and Direction for Future Research

Being an Applied Research, the present study is quite relevant and should help the practising managers as an aid to their strategic initiatives. What is worth noting is that the problems faced by blue-collar personnel are generic across the developing countries in Asia. The study may help them in bringing about cultural transformation in their companies by promoting mutual respect between the white-collar and blue-collar personnel. Such a culture should enhance the performance of blue-collar personnel (i.e. operational productivity).

The study has established a trend to look at system-problems of an organization i.e. problems faced by the plant-associated blue-collar personnel in chemical process industries. It is now for the management students and researchers to take up exclusive applications of this study to specific companies with endorsement of their managements so as to fine-tune the study and focus on resolutions of problems of individual companies.

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Emotional Attachment for Emotional Brand: A Model

Maheswari R. and David P.Jawahar

Evaluation of services generally depends upon the impact of interaction between a consumer and a provider service encounter, an important facet in service industry. The service encounter may be positive or negative. This emotional impact leads to perception of service quality provided by the firm. Emotional attachment and brand loyalty together generate a kind of synergy. Research on service loyalty has focused on service encounter evaluations, emotional connections with the customers and employee behaviour. Eventhough the significance of emotions in service industry has been explored; there has been no research to measure the emotional attachment of the customers. This research initiative is an attempt to build a model which would facilitate the measurement of emotional attachment in developing emotional brands.

Service industries play an important role in the economic development of a country. Tremendous competition is a reality, thanks to the fantastic growth of service industries. Suitable strategies have become imperative for companies to survive in the competitive arena. Successful companies have started articulating on brand building as their important strategy. Branding is a dynamic concept which has assumed various dimensions over these years.

Companies have adopted various branding strategies over the years to survive and withstand competition. Gradually, companies have realised that strong emotional associations can create long-term and everlasting relationships between brands and customers. Brands now prefer to enter new markets with emotional promises rather than with assurances of trustworthiness. Customers also wish to have economic contracts with brands based on emotions or faith.

Mrs.R.Maheswari, Research Scholar, Bharathidasan Institute of Management, Post Box. No.12, BHEL Complex, Tiruchirapalli-620 014, Tamilnadu, India, E-Mail: maheswari@bim.edu

Dr. P. David Jawahar, Reader, Bharathidasan Institute of Management, Post Box. No.12, BHEL Complex, Tiruchirapalli-620 014, Tamilnadu, India, E-Mail: dj@bim.edu

Service sectors seem to be just entering the branding age. They either do not consider themselves as being a part of it or have just started becoming aware that they are. The banking industry is a fine example. If bank customers were to be asked what bank brands they knew, they probably would not know or understand what to answer. They know the names of banks, but not bank brands. Name contraction often signals that a brand concept is still in a formation stage. Specific "bank products" which are visible are also easy – to- imitate. They are just the brand's external manifestations. Banks and insurance companies have understood the key to what makes them different: "the relationships that develop between a customer and a banker under the auspices of the brand" (Kapferer 2003).

Unlike products, evaluation of services is complex and difficult. The four characteristics of services namely *intangibility, heterogeneity, perishability and inseparability* make service evaluations difficult. *Inseparability* is an important characteristic of services which accounts for the direct interaction between the service provider and the customer. One of the concepts which have been considered important in service evaluations is *service encounter.*

Service Encounter

Service encounter is defined by Shostack (1985) as "a period of time during which a consumer directly interacts with a service." This definition includes all the aspects of the service firm, personnel, physical facilities and other tangible elements with which the consumer may interact.

These encounters may be routine when a customer is visiting the service firm each time. The customers may have from time to time some difficulty during service delivery. In a bank, it may be a response towards a lost credit card or debit card or pass book, etc. The customer may request to hold on a cheque from payment. These are few incidents which the customers may feel important and critical to them. The approach of the employee involved in that particular critical incident will make the service encounter to be termed as positive or negative.

Sometimes there may be a mistake on the part of the bank employee during service delivery. The approach of the employee to recover the service failure also accounts for the positive or negative service encounter evaluation. Most of the customers nowadays use remote banking facilities like ATMs or internet banking. When there is a specific problem which can be solved only at the bank, they approach it. Generally customers want their problems to be fixed quickly and they are most often anxious or in a state of impatience. The service performance in solving these problems would create positive service encounter evaluation.

Each encounter subliminally creates an emotional feeling in the customer. Consistent emotions determine the level of attachment. This would enhance or decrease the emotional bonding with the firm. As reported in the ABA Banking Journal (2004) "Don't irritate an already irritated customer ...." Further the same article quotes as, "It's not enough to do things once in a while and hope for the best – consistency counts."

Measurement of Service Encounter Satisfaction

Generally service encounter is the service experienced from the customer point of view. Bitner, Booms, Bernard and Tetreault (1990) have categorised particular events and related behaviours of contract employees. Through research the authors have collected 700 incidents from customers of airlines, hotels and restaurants. The incidents were approximately half satisfactory and half dissatisfactory. They have identified three major groups of employee behaviours that account for satisfactory and dissatisfactory incidents as:

1. Employee response to service delivery system failures
2. Employee response to customer needs and requests
3. Unprompted and unsolicited employee actions

Within these three major groups they have further classified 12 categories of incidents. According to them, "the classification system that emerged from the data can be used by managers of the industries studied and may be applicable to other high-contact, transaction - based service industries as well. The classification system is abstract enough to generalise across several industries, but sufficiently detailed to suggest an overall management approach to improving customer satisfaction in service encounters."

Also, the above categories have been tested for robustness and validity across different industries (Grembler and Bitner 1992).

Eventhough service encounter accounts for both human elements and other tangible elements as well, *it is* the involvement of human elements directly in services that makes the situation complex. Interaction between the customer and the service personnel is an important aspect of any service relationship. According to Marc Gobe (2001) "Service is selling. Relationship is acknowledgement." This acknowledgement leads to an *Emotional Attachment* in the long run.

Emotional Attachment and Emotional Brand

Research on service industries has talked about the role and the significance of emotions in the service processes. The service personnel (human element) in an organization have been identified as crucial to the emotional connection and development of a long-term relationship with the customer (Kandampully 1998).

According to Thurau Hennig, Groth, Paul & Griller (2006), "Emotions that customers experience during service encounters play crucial roles and directly affect the success of service relationships. Because customer emotions appear to be the key drivers of rapport with employees and ultimately customer satisfaction and also loyalty intentions, service organizations may benefit from focusing their attention on increasing positive customer emotions. This recommendation is consistent with emerging literature on customer delight (Rust and Oliver 2000), which stresses the emotional component of customer service evaluations."

Service encounters include all the physical facilities and tangible elements also which the customer interacts directly. Online transactions also play an important role in the present business world. Case in point is the observation made by Massad, Crowston (2003), "as the number of purely online start – up businesses increases and organizations complement their existing business by "going online," it is important to understand how the transactions between customers and service providers are affected on the web. By identifying the antecedents of customer satisfaction with electronic service encounters, online service providers will be able to consistently satisfy their customers in order to establish and maintain enduring relationships."

Labour intensive service brands involve direct customer interaction to a greater extent. The Services like medical help, insurance, banking, hairstyling, beauty parlour, automobile repair, etc. are delivered periodically. Customers feel these services to be intimate and important. Evaluation of these credential services is quite complex. Trust and confidence towards the service provider is all the more important in these cases.

Berry and Lampo (2004) say, "Services that are highly interactive lend themselves particularly well to an emotion – based brand positioning. When customers use words like "love" and "amazing" to describe service providers, they are conveying a high – and unusual – level of commitment to a commercial relationship. The brand has become personal to them and important to them. They are not just loyal customers; they are advocates who are prepared to do their part to sustain the relationship."

Service organisations create a blue print to map their service processes. While creating this blue print it is essential to look into the process from the shoes of the customer. While doing so the service provider would be able to capture the key points which would touch the customer emotionally. According to Crosby and Johnson (2005), "Emotions are integral to customer loyalty. Strong emotions towards a product / service can build a high barrier for competitors to surmount. While rational benefits are vulnerable to being copied by competition, emotional bonds are much more difficult to break. Knowing that emotions are the strongest glue for building relationships and loyalty, it is a challenge that only a few companies can master."

Simms (2006) also asserts that, "The customers' emotional loyalty is much stronger than companies believe. The best way to improve customer service is not to invest in expensive research techniques or pointless customer relationship management systems, but to experience the company and its products and services as a customer would."

The importance of emotional bonding has been articulated by other authors also. According to Hall (2005), "the delivery side of the organization must become as intentional as the marketing side in embedding an emotional tie into the customer experience. The possibilities are endless, but at the end of the day the emotional connection must come from the combination of the product, price and delivery."

Mckenna (2005) argues: "You can't buy a person's loyalty. True loyalty is created through an emotional bond and through the heart, not the wallet. Emotional bonds can only be established through people not products."

There is a lot of theoretical evidence endorsing the role of emotional bonds or emotional connections in service industries. But there is no empirical research to measure the extent to which emotional attachment influence brand loyalty. Emotional attachment has not been measured using any scale in service industries.

With the concept of Emotional Branding having gained a legitimate place in marketing, the need for a model to better understand the functioning of emotional brands in service industry is essential. This research initiative is an attempt to build a model which would facilitate the measurement of Emotional Attachment in building Emotional Brands. This paper attempts to test the association between Service Encounter Satisfaction and Emotional Attachment.

Emotional Brand Model

The proposed model encompasses Service Encounter Satisfaction and Service Quality as independent variables. It is clear from the definitions of Service Quality and Service Encounter Satisfaction that consumers generally evaluate any service based on these two factors. Theoretically it is understood that there is a close association between these two factors. So it is proposed to combine both these variables and name it as "*Service Evaluation Index.*" The association between these two variables would be statistically tested in our research.

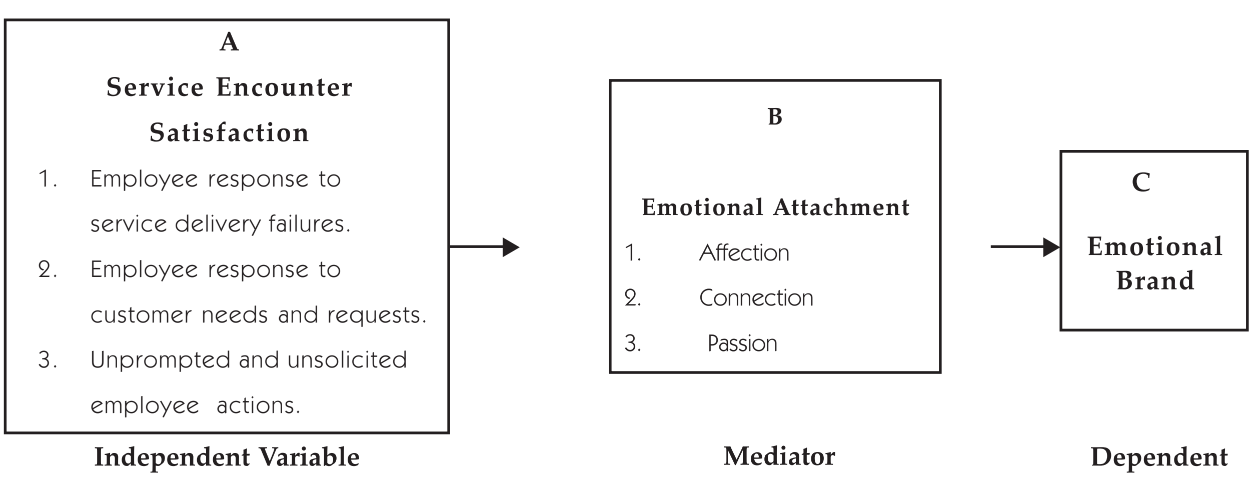
Consistent satisfaction levels lead to Emotional Attachment. This makes the consumer to connect themselves with the service firm on an emotional level. The service by itself becomes a Brand .This Brand Loyalty (on the lines of Emotional Branding) is named as "*Emotional Brand.*" It is proposed that *Emotional Attachment* would act as a mediator between Service Evaluation Index and Emotional Brand.

This paper however will restrict the scope to testing the association between Service Encounter Satisfaction and Emotional Attachment. Here Service Encounter Satisfaction is measured using the classification and grouping developed by Bitner, Booms, Bernard and Tetreault (1990).

Based on the premise that consumers are able to articulate the nature of their emotional attachment to brands, emotion items thought to potentially indicate attachment (Thomson Matthew, MacInnis Deborah.J and Park Whan.C 2005) were identified.

The evaluation of Emotional Brand is done based on the metric developed by Sirgy, Johar, Samli and Clairborne (1991).

Figure 1: Emotional Attachment as a mediator between Service Encounter Satisfaction and Emotional Brand



Constructs used in the Model

Any theoretical model has to be tested and this model was also tested by constructing a questionnaire. The batteries selected for the questionnaire are from pre-existing research. The batteries are:

A. **Service Encounter Satisfaction** which includes 12 items under three factors.

(Bitner Mary Jo, Booms Bernard H., and Tetreault Stanfield Mary 1990)

Employee Response to Service Delivery System Failures

1. Response to unavailable service
2. Response to unreasonably slow service
3. Response to other core service failures

Employee Response to Customer Needs and Requests

4. Response to "special needs" of customers
5. Response to customer preferences
6. Response to admitted customer error
7. Response to potentially disruptive others

Unprompted and Unsolicited Employee Actions

8. Attention paid to the customer
9. Truly - out - of - the - ordinary employee behaviour
10. Employee behaviors in the context of cultural norms
11. Performance under adverse circumstances
12 Over- all banking experience

B. **Emotional Attachment** includes 10 items based on (Thomson Matthew, MacInnis Deborah.J and Park Whan.C 2005).

Affection

1. Affectionate
2. Friendly
3. Loved
4. Peaceful

Connection

5. Attached
6. Bonded
7. Connected

Passion

8. Passionate
9. Delighted
10. Captivated

C. The evaluation of an **Emotional Brand** would require answering the following questions developed by Sirgy, Johar, Samli and Clairborne (1991).

1. How would you characterise your loyalty toward this bank?
2. How does this bank compare to your "ideal" bank?
3. How often have you recommended the bank to your friends?
4. How often have you said positive opinions about the bank?
5. How often have you thought of switching over to another bank?
6. Do you prefer to use all the services and products from this bank only?

Testing the Model

The following steps have been taken to test the reliability and applicability of this model. A pilot survey was conducted. The sample size was 42 and the survey was done within Tiruchirapalli city (a medium sized city in South India). The questionnaires were framed to the test model and tested with respect to the Banking industry. The test results are discussed below.

Reliability Assessment

The reliability of the measures used was assessed using Cronbach's alpha coefficient.

Service Encounter Satisfaction Alpha = 0.7707

Exhibit 1: Reliability Analysis - Scale (Alpha)

		Mean	Std Dev	Cases
1.	DELIVERY FAILURES	4.8452	1.3703	42.0
2.	CUSTOMER NEEDS	4.9667	1.0257	42.0
3.	UNPROMPTED & UNSOLICITED	4.3857	1.3284	42.0

Statistics for SCALE	Mean	Variance	Std Dev	N of Variables
	14.1976	9.6549	3.1072	3

Reliability Coefficients

N of Cases = 42.0 N of Items = 3 Alpha = .7707

Emotional Attachment Alpha = 0.9232

Exhibit 2: Reliability Analysis - Scale (Alpha)

		Mean	Std Dev	Cases
1.	AFFECTION	4.0429	1.5599	42.0
2.	CONNECTION	4.0310	1.6709	42.0
3.	PASSION	3.8381	1.6713	42.0

Statistics for SCALE	Mean	Variance	Std Dev	N of Variables
	11.9119	20.8503	4.5662	3

Reliability Coefficients

N of Cases = 42.0 N of Items = 3 Alpha = .9232

Emotional Brand Alpha = 0.8533

Exhibit 3: Reliability Analysis - Scale (Alpha)

		Mean	Std Dev	Cases
1.	LOYALTY	5.0714	1.5043	42.0
2.	IDEAL	4.7381	1.2109	42.0
3.	RECOMMEND	4.2143	1.8940	42.0
4.	OPINIONS	4.9048	1.5111	42.0
5.	SWITCH	4.4524	2.0025	42.0
6.	PREFER	4.5952	1.7399	

Statistics for SCALE	Mean	Variance	Std Dev	N of Variables
	27.9762	57.5848	7.5885	6

Reliability Coefficients

N of Cases = 42.0 N of Items = 6 Alpha = .8533

The above Alpha coefficients indicate high internal consistency within each scale.

Regression Analysis

Using Regression analysis the following relationships have been tested here.

1. **It is proposed that Service Encounter Satisfaction would be associated with Emotional Attachment.**

Service Encounter Satisfaction $\longrightarrow$ Emotional Attachment .... **(1)**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561[a]	.315	.298	1.2782

a Predictors: (Constant), total service encounter satisfaction
b Dependent Variable: total emotional attachment

Exhibit 4: Regression Analysis

		total emotional attachment	total service encounter satisfaction
Pearson Correlation	total emotional attachment	1.000	.561
	total service encounter satisfaction	.561	1.000
Sig. (1-tailed)	total emotional attachment	.	.000
	total service encounter satisfaction	.000	.
N	total emotional attachment	42	42
	total service encounter satisfaction	42	42

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.002	1	30.002	18.365	.000[a]
	Residual	65.347	40	1.634		
	Total	95.350	41			

a Predictors: (Constant), total service encounter satisfaction
b Dependent Variable: total emotional attachment

Coefficients[a]

Model		Unstandardized Coefficient		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.040	.938		.043	.966
	total service encounter satisfaction	.830	.194	.561	4.285	.000

a Dependent Variable: total emotional attachment

The **R square** value for equation (1) is **0.315.** Service Encounter Satisfaction has accounted for 31.5 percent variance in Emotional Attachment. It indicates a large effect size of 0.315. The Standardized Beta Coefficient is **0.561** which accounts for the deviations on the dependent variable. This proves a strong association between the variables. The regression equation is

Emotional Attachment = 0.040+ 0.830 x Service Encounter Satisfaction

Thus it is proved that Service Encounter Satisfaction and Emotional Attachment are associated with each other.

2. It is proposed that Service Encounter Satisfaction would be associated with Emotional Brand.

Service Encounter Satisfaction → Emotional Brand .... **(2)**

Exhibit 5: Regression Analysis

Correlations

		emotional brand	total service encounter satisfaction
Pearson Correlation	emotional brand	1.000	.536
	total service encounter satisfaction	.536	1.000
Sig. (1-tailed)	emotional brand	.	.000
	total service encounter satisfaction	.000	.
N	emotional brand	42	42
	total service encounter satisfaction	42	42

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536[a]	.288	.270	1.1109

a Predictors: (Constant), total service encounter satisfaction

b. Dependent Variable: emotional brand

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.952	1	19.952	16.166	.000[a]
	Residual	49.367	40	1.234		
	Total	69.319	41			

a Predictors: (Constant), total service encounter satisfaction

b Dependent Variable: emotional brand

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.501	.815		1.842	.073
	total service encounter satisfaction	.677	.168	.536	4.021	.000

a Dependent Variable: emotional brand

The **R square** value for equation (2) is **0.288.** Service Encounter Satisfaction is accounted for 28.8 percent variance in Emotional Brand. It indicates a large effect size of 0.288 and the Standardized Beta Coefficient is **0.536** which accounts for the deviations on the dependent variable. This proves a strong association between the variables. The regression equation is

Emotional Brand = 1.501 + 0.677 x Service Encounter Satisfaction

Thus it is proved that Service Encounter Satisfaction and Emotional Brand are associated with each other.

3. It is proposed that Emotional Attachment would act as a mediator between Service Encounter Satisfaction and Emotional Brand.

Service Encounter Satisfaction $\longrightarrow$ Emotional Attachment $\longrightarrow$ Emotional Brand... **(3)**

Exhibit 6: Regression Analysis

Correlations

		emotional brand	**total service encounter satisfaction**	**total emotional attachment**
Pearson Correlation	emotional brand	1.000	.536	.636
	total service encounter satisfaction	.536	1.000	.561
	total emotional attachment	.636	.561	1.000
Sig. (1-tailed)	emotional brand	.	.000	.000
	total service encounter satisfaction	.000	.	.000
	total emotional attachment	.000	.000	.
N	emotional brand	42	42	42
	total service encounter satisfaction	42	42	42
	total emotional attachment	42	42	42

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.672[a]	.452	.424	.9873

a Predictors: (Constant), total emotional attachment, total service encounter satisfaction
b Dependent Variable: emotional brand

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.307	2	15.653	16.060	.000[a]
	Residual	38.012	39	.975		
	Total	69.319	41			

a Predictors: (Constant), total emotional attachment, total service encounter satisfaction

b Dependent Variable: emotional brand

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.484	.724		2.049	.047
	total service encounter satisfaction	.331	.181	.262	1.831	.075
	total emotional attachment	.417	.122	.489	3.413	.002

a Dependent Variable: emotional brand

The **R square** value for equation (3) is **0.452.** Here both Service Encounter satisfaction and Emotional Attachment account for 45.2 percent variance in Emotional Brand. It indicates a large effect size of 0.452 and the Standardized Beta Coefficient is **0.262** for Service Encounter Satisfaction and **0.489** for Emotional Attachment which account for the respective deviations on the dependent variable. The regression equation is

Emotional Brand = 1.484 + 0.331 x Service Encounter Satisfaction + 0.417 x Emotional Attachment

Comparing equations (2) and (3) we find that there is an increase in R square value after the inclusion of Emotional Attachment. This shows a synergy and correlation between the independent variable and the mediator.

Also the slope coefficient of Service Encounter Satisfaction has decreased from 0.677 to 0.331. As the slope of Service Encounter Satisfaction is not zero the mediation is not total. The mediation is partial.

The amount of mediation is calculated as (0.677 – 0.331) =0.346

Thus it is proved that Emotional Attachment acts as a mediator between Service Encounter Satisfaction and Emotional Brand.

4. It is proposed that Emotional Attachment would be associated with Emotional Brand.

Emotional Attachment $\rightarrow$ Emotional Brand …. **(4)**

Exhibit 7: Regression Analysis

Correlations

		emotional brand	total emotional attachment
Pearson Correlation	emotional brand	1.000	.636
	total emotional attachment	.636	1.000
Sig. (1-tailed)	emotional brand	.	.000
	total emotional attachment	.000	.
N	emotional brand	42	42
	total emotional attachment	42	42

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636[a]	.404	.390	1.0159

a Predictors: (Constant), total emotional attachment b Dependent Variable: emotional brand

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.039	1	28.039	27.170	.000[a]
	Residual	41.280	40	1.032		
	Total	69.319	41			

a Predictors: (Constant), total emotional attachment b Dependent Variable: emotional brand

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.552	.442		5.779	.000
	total emotional attachment	.542	.104	.636	5.212	.000

a Dependent Variable: emotional brand

The **R square** value for equation (4) is **0.404.** Emotional Attachment accounted for 40.4 percent variance in Emotional Brand. It indicates a large effect size of 0.404 and the Standardized Beta Coefficient is **0.636** which accounts for the deviations on the dependent variable. This proves a strong association between the variables. The regression equation is

Emotional Brand = 2.552+ 0.542 x Emotional Attachment

Thus it is proved that Emotional Attachment and Emotional Brand are associated with each other.

Limitations

1. Private sector banks and Public sector banks have been clubbed together in our analysis. However this may not be considered as a serious limitation because, the services provided by both the sectors are similar. Moreover, the difference in the quality of service provided by the banks in both the sectors is almost indistinguishable in recent years.

2. The samples have been drawn from only a semi-urban town. If the samples had been drawn across rural and urban regions the predictions could be clearer.

Conclusion

The proposed model attempts to prove the relationship between Service Encounter Satisfaction and Emotional Attachment. Emotional Attachment has been identified to be a mediator in building Emotional Brands. This working paper clearly indicates that Emotional Attachment acts as a partial mediator in building Emotional Brands. Reasons for partial mediation could be attributed to perceived core service quality, value for money, personal friendship between customer and service employees (Ken, Beverly and Frances 2001); transaction cost or switching cost (Lee and Cunnigham 2001); word of mouth communication, complaining behaviour (Josee, Ko and Martin 1999), etc. The theoretical model on a trial run has thrown up results that are statistically significant. The results of the reliability tests show that the constructs used in the questionnaire are fit to be used. Further the theoretical association between the independent variable, the mediator and the dependent variables used in the model has been found to be statistically significant. It is proposed that this model can be used in any service industry in building Emotional Brands. However, further testing and validation is recommended before drawing final conclusions on this issue. Currently, such a research involving a larger sample size is in progress.

Key Words: Emotional attachment, Emotional Brands, Service encounter.

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Audacious Kiranas vs Organised Retailers

Abhinava S.Singh, Siddharth G.Das and Mamta Mahapatra

This study of the Indian retail industry is an attempt to elucidate on the realignment tactics and strategies of Kiranas against emerging organized retailers. New retail business models are being created to lure the Indian consumer away from the traditional Kiranas. The Kiranas are not playing silent spectators to this new reality. Although, current demographic indicators and growing consumerism point positively towards the growth of organized retailers, consumers are still loyal to Kiranas. In spite of success stories like Big Bazaar, the Indian Kirana community which forms the hub of small business and entrepreneurs in India is still holding ground in the extremely competitive Indian retail market.

According to a report in the Wall Street Journal, retail is the largest private industry in the world economy (refer table 1). India has been a nation of *Kiranas* - around 12 million retailers; more retail shops than the rest of the world put together. In India, retail is the 2nd largest sector after agriculture and contributes 10 to 11 percent of our GDP. According to Pankaj Gupta of Tata Strategic Management Group, India probably has the highest density of retail outlets in the world, with one for approximately every 90 persons; little wonder that the country is the ninth-largest retail market in the world, with estimated annual retail sales of around USD215 billion in 2005 i.e. Rs.960,000 crores. Briefing on India, the Economic Intelligence Unit (EIU, 2005) estimates that retail markets in India will grow from USD394 billion in 2005 to USD 608.9 billion in 2009. It implies that the organized retail market in India is expected to grow at a higher rate than GDP growth in the next five years driven mainly by frequently changing lifestyles, strong income growth and favourable demographic patterns. Moreover the growth of the urban middle

Mr.Abhinava S.Singh, Senior Lecturer, L.J.Institute of Computer Applications, LJ College Campus, Near Nagdev Kalyan Mandir, S.H.Highway, Ahmedabad-382210, Email: talk2me.abhi@gmail.com

Dr.Siddharth G.Das, Assistant Professor, L.J.Institute of Computer Applications, LJ College Campus, Near Nagdev Kalyan Mandir, S.H.Highway, Ahmedabad-382210, Email: siddhy@indiatimes.com

Dr.Mamta Mahapatra, Associate Professor, School of Management, Sumandeep Vidyapeeth University, At/PO: Pipariya, Ta.Waghodia, Vadodara-391760, Email: mmahapatra86@yahoo.co.in

class which demands value for money has led to lot of changes on the retail front.

The share of organized trade in this enormous market is currently very small. It is estimated at just USD8 billion (Rs.35,000 crores) in 2005, up from USD6.25 billion (Rs. 28,000 crores) in 2004. This accounts for less than four percent of the total retail trade in the country (TSMG, 2006). Organized trade in India is very underdeveloped in comparison with other emerging markets in Asia, Latin America and Eastern Europe. Figures show that developed markets like the US are far, far ahead (*See table 2 and 3*).

A research done by the Tata Strategic Management Group (2006) indicates that over the next 10 years, the total retail market in India is likely to grow at a compounded annual growth rate (CAGR) of 5.5 percent (at constant prices) to USD374 billion (Rs.16,77,000 crores) in 2015. The organized retail market is expected to grow much faster, at a CAGR of 21.8 percent to USD55 billion (Rs.246,000 crores) in the same time frame, garnering around 15 percent of overall retail sales. Based on their projections, the top five organised retail categories by 2015 would be food, grocery and general merchandise; apparel; durables; food service; and home improvement (*Table 4*).

According to a CII-AT Kearney report, organized retail pie is dominated by clothing, textiles and fashion accessories (40 percent) followed by food and grocery (19 percent). The overall retail market is dominated by food and groceries, which account for three-fourths of the same.

Consumerism

All said and done, retailing is not only an integral part of our economic structure but also shapes, and is shaped by our way of life. Growing consumerism would be a key driver for organised retail in India. Several demographic indicators show favourable trends for the growth of organised trade:

- Rapid income growth: consumers have a greater ability to spend.
- Increasing urbanisation: larger urban populations that value convenience, coupled with the higher propensity of the urban consumer to spend.
- Growing young population: growth of the post-liberalisation maturing population, with the attitude and willingness to spend.
- Spend now vs save earlier: consumers are willing to borrow for present consumption.

In the words of N. Meenakshi (2007), recent changes in demographic and household structures in India have significantly increased the impact of teenagers on parental decisions. The involvement of teenagers in decision making spreads across diverse product categories. They mainly influence the purchase of high involvement goods like Cars, TVs, Music Systems, Computers and Refrigerators. Coinciding with the view, one of the respondents in our shopping behaviour research stated that; “We have to value our children’s preferences and choices for purchase of goods because they are more aware of the use and attributes of the items along with possible benefits.”

The Case of Rajasthan and Dilip Provision Stores

There used to be 2 *Kirana* stores i.e. *traditional father and son* outlet in my immediate vicinity, Rajasthan provision stores and Dilip stores. Both have been around for over 20 years. Last week, Dilip stores shut down and Rajasthan stores, just 50 meters down the road from Dilip, has refurbished and expanded.

We asked the owner of Dilip stores why he went out of business. His reply: the market is just not the same: Customers are too fussy; it is impossible to stock all the items they need and match the prices at larger stores like Big Bazaar, Adani (now taken over by Reliance Retail) or the neighbourhood Subhiksha. What has happened?

Contemporary Scenario

Hard Realities

These two stores are a representative of the Indian retail environment today. *Kiranas*, which have long been the dominant part of the Indian retail scene, are threatened by organized retailers who bring with them efficiencies in pricing, promotions and convenience. Today’s young Indians demand and receive a better experience in the large supermarkets and hypermarkets that are mushrooming all over the country (Arya, 2005).

Dilip has to realize that supermarkets are here to stay and will pose a challenge for small players. He is right in thinking those 20 years back; it was easier to do business then. Today, however, FMCGs/ Packaged Consumer Goods Company too sense the power shift from them to big retailers like Big Bazaar and others. In the words of Nirmalya Kumar, Director of London Business School's Centre of Marketing, and Co-Director of its Aditya Birla India Centre; "*While the last century belonged to large brand owners, the next hundred years will belong to large retailers.*" This statement also implies that in the future, successful brands will have to reorient towards this new reality. Distribution channels have consolidated while the media has fragmented. Audiences are deserting the TV for gaming, mobile phones and the Internet. Even if they are in front of the TV, there are 500 channels to choose from. With media audiences completely fragmented, it is both hard and expensive to reach a mass audience. At the same time, distribution channels have consolidated. Today, 8-10 major retailers. can account for 20-30 percent of a manufacturer's global sales. (*See table 5*) So they have enormous negotiating power and leverage. Retail consolidation started around the 1970s with the expansion of Ahold of Holland, Carrefour of France, Metro of Germany, Tesco of the UK, and Wal-Mart of the US. In the 1980s, these retailers rapidly became international. This global trend and current scenario in India, coupled with the Indian consumer's attraction to the larger format store, is forcing smaller *Kiranas* to '*shape up* or *ship out*.'

Earlier Practices

Many *Kiranas* have also been engaged and/or accused in unethical practices like selling products above MRP, cheating on weights, selling expired imported products, selling loose packs and promotional samples, etc (Arya, 2005). All this cannot thrive in the new retail scenario.

So, is it all over for the *Kirana*? Let's look at the strength of the *Kirana* stores, how they have survived and thrived in the Indian retail market and how these strengths can be leveraged for *competitive advantage* against organized players.

Advantage…Kirana

Strengths of the Kiranas

1. The *Kirana* network is so wide-spread that most of us have a *Kirana* store within five minutes of our home i.e. *convenient location*.

2. The *Kiranas* also operate on an extremely low-cost model where they pay little or no taxes on family-owned properties, with most of the family members working in the store itself. The overhead costs of *Kiranas* are therefore so low.

3. Their operational advantages include in most of the cases a *no-cost cycle home delivery-wala network* which caters to impulse needs at short notice.

4. Early openings and late closing times which suits many families. The bigger organized retailers will take a long time to match these levels of service.

5. The greatest advantage though, is their roots in the community. *Kirana* stores inherently possess warmth; customization and empowerment of support staff to take one-off decisions i.e. an extension of customer service which is a huge challenge in retailing industry. (Seth, 2005) The implications suggest that *Kiranas* have a clear understanding of their customers' needs, wants and preferences. In the words of Prasoon Joshi, Regional Creative Director of McCann Erickson, "*Understanding consumers is the most important task of a marketer and unfortunately, management education doesn't emphasize on the same.*" The larger stores will take a long time to achieve this in spite of all the data mining tools or CRM technologies available to them. Consider this example, a new neighbour in our society told us that she went to Rajasthan provision stores to buy utilities, like buckets, for her new home. By looking at her list, the perceptive and intuitive owner was able to suggest all the items she would need like brooms and insect repellent, many of which she had forgotten to include. He went a step further,

providing her with numbers of plumbers, carpenters, even suggesting ice cream parlors, cooks, good restaurants, decent play groups and schools, insurance agents and milk vendors in the area. When she left the store with his visiting card, Rajasthan stores had built another *customer for life*!

6. We can also add another-strength of the *Kiranas*-Special Products., i.e. imported sauces, chocolates, fresh snacks like *Alu Muttar* sandwich, bakery items, Gujarati items like *khakras* and *dehbras*, etc.

Tactics and Strategies for Survival and Growth

1. The low-shelf life (less than 12 hrs.) of fresh snacks and home-made, health driven products present a huge opportunity to the *Kiranas*.

2. The *Kiranas* could also consolidate their buying of FMCGs to gain economies and efficiencies. In certain areas, *Kirana* buying consolidation through *aggregation of kiranas* has already begun, like in the Kutchi Trading Association, 25 provision stores in Delhi getting together under the banner of Provision Mart, Bombay Bazaar, Ulhasnagar Sindhi Association (USA), etc. Dilip stores should mobilize his *Kirana* brothers to form an independent, centralized buying cartel to match the economies of scale that organized retailers have.

3. *Kiranas* can adapt to the new realities by looking beyond the margin of Rs.2 and Rs.5 on individual products and instead focus on a complete basket or package for families. This will result into creation of *multiple-product profitability* (Arya, 2005).

4. *Kiranas* can collaborate aggressively with manufacturers for improved merchandising through POPs (Point of Purchase) and also create special 'promo-zones' that show-cases new products, engages consumers in sampling and market research. This cooperation can also benefit the manufacturers and shield them against big negotiators like Big Bazaar along with reduction of over-reliance. Interestingly, companies like HLL and ITC have joined hands with small stores to curb the bargaining power of big retailers. For e.g. *super value stores.*

5. Neighbourhood *Kiranas* can also join hands with organized retailers by becoming their franchisees. Besides ROI, the *Kiranas* will gain economies of scale, quality and great shopping environment and great product mix. In fact, Reliance Retail has already identified *Kiranas* in strategic locations as potential franchisees.

6. *Kiranas* can also grow through lots of value added services like film-roll developing, stocking OTC brands, selling telecom cum mobile related packages, outsourced dry cleaning, bill payment for utilities, or/and like Rajasthan stores, even offer free advice and services of plumbers, cooks, etc.

7. At a more socialistic level, the *Kirana* community forms the hub of small business and entrepreneurs in India-more home-grown than any other form of retail. There is an enormous opportunity to create a World-Class Community Feeder System (A little on the lines of the World Famous Mumbai Dabbawala Network).

A Qualitative Enquiry of Shopping Behaviour

We carried out a qualitative enquiry into the shopping behaviour of individuals with regard to their past and present shopping habits.

Research Question: Has the emergence of organized retailers resulted in a radical change in the shopping habits of consumers?

Objective: To carry out qualitative enquiry in order to understand the shopping behaviour of selected conscious respondents.

Methodology

We conducted a qualitative research on the basis of personal interviews of *250 respondents* from different regions of *Ahmedabad* and *Gandhinagar.* We used an open-ended questionnaire for data collection so as to ensure that the respondents are not biased in their responses.

Findings and Implications

Findings

Although initially there was a mass exodus of consumers (87 percent) shifting to Big Retailers, our findings suggest that a majority of them have come back (68 percent) to the old and reliable *Kiranas*. Interestingly, a few of them have gone through considerable changes in their shopping habits as they rely on both Organised Retailers like Big Baazar and Subhiksha (for their monthly shopping needs) and *Kiranas* for their daily shopping needs.

13 percent of our respondents have stuck to *Kiranas* because of several reasons like proximity, convenience, strong relationship and availability of other facilities like home delivery.

19 percent of our respondents have gone "Bonkers" over the facilities provided by the big retailers. They have made their visits to big retailers a family outing and simply love the ambience, variety, promotional offers, price advantage (perception based) and additional facilities like more financing options return and exchange policies. Interestingly, few respondents felt that visits to Big Baazar had a therapeutic effect on them and left them feeling good!

Consumers who have returned to the *Kiranas* have interesting experiences to share. Most of them have grown tired of the long queues, unpleasant behaviour of retail staff, traffic and parking problems, distance from residence and dip in the physical facilities like AC, lifts, trolleys, etc. Moreover they also feel that old offers like currencies (Big Bazaar) and other promotional schemes have been discontinued. It is also no hidden fact that most of the shoppers at big retailers ended up buying more than they required.

We asked respondents to choose between 'Shopping Convenience' and 'Shopping Experience.' Around 54 percent of the respondents especially from Gandhinagar chose 'Convenience' as they had to spend money and time to visit big retailers due to absence of big retailers near their homes. 42 percent of the respondents chose 'Shopping Experience' while the remaining (4 percent) of the respondents chose both 'Convenience' and 'Experience.'

Most of the respondents (72 percent) are in favour of savings due to discounts or promotions. Almost all the respondents who shop at *Kiranas* or who have come back to *Kiranas* do place importance to savings but not at the cost of convenience. They also feel that there is not much difference in the savings in comparison to shopping at big retailers and in fact they end up spending more which crosses their monthly budget limits.

All respondents shopping at organized outlets avail credit facility through credit cards, Sodexo Pass and debit cards. They in most of the occasions do not use cash. Interestingly, a sizeable number of respondents (78 percent) shopping at *Kiranas* are getting credit facilities in the form of credit periods ranging from 1 to 3 months. Most of them have indicated the use of it and they are happy to avoid the credit card trap. Looking at the overall response, 98 percent of the shoppers have been offered credit facility by both types of retailers. 95 percent of the respondents are using credit facility and they attach a great deal of importance to this option offered through retailers.

Without doubt, almost all respondents (92 percent) have confirmed the importance of location as a key criterion for shopping. But the interpretations of the meaning of location differ. Respondents shopping at organized outlets correlate location with the posh locality, big space, food and entertainment facilites, parking space, movies, visual ambience, etc while *Kirana* shoppers connected location importance with the nearness of their homes to the concerned shops i.e. immediate, anytime and urgent availability of groceries and related items.

99 percent of the respondents seek *variety (availability of Brands and their Stock Keeping Units-SKUs)* during shopping but respondents shopping at *Kiranas* are aware of the lack of variety at their shopping destinations. They feel it is not a deterrent for them as they place more

importance to other factors like convenience, relationship and long period credit facilities. They are also of the opinion that *Kiranas* may not stock all their favourite items but they tend to get it in a few days. Without doubt, respondents shopping at organized outlets seek *variety* and are eventually rewarded with *variety* through *Instant Gratification*. The availability of *variety* in items and plush stocks is definitely an advantage of a larger format like Big Baazar and Star Bazaar.

All respondents have agreed to the availability of *home delivery* from their retailers. But those shopping at organized retailers have indicated that they take their cars for their monthly purchases. For small purchases, they opt for *Kiranas*. In fact, one of the organized retailers i.e. *Subhiksha* which is positioned as a convenience outlet has made delivery to home as one of its Unique Selling Proposition (USP). For shoppers at big retailers like *Big Baazar*, the facility of home delivery is not provided on Sundays and as such they feel it is not very important for them. While, respondents shopping at *Kiranas* associate *home delivery* as a facility being provided due to *relationships*!

Implications

1. Majority of the people will continue to rely on the *Kirana*s due to convenience and strong relationships. This is where organized retailers may lose out.

2. Very few people will consider visiting a big retail shop as a "Family Outing" and very "Therapeutic."

3. Shopping at big retail shops often leads to excess or unnecessary purchases. That does not happen while buying items from *Kiranas*.

4. Location of such big retail shops, far away from their homes, is a big dampener and the visit is more of 'convenience' than 'experience,' justifying the "outing" mode of shoppers.

5. Most of the people prefer discounts and promotions as it directly leads to money savings. In spite of not matching the levels of discounts and promotions like the organized retailers, *Kiranas* still connect with customers due to generous offering of credit facility ranging between one to three months without interest.

6. A majority of people seek variety during shopping. This is perhaps one disadvantage of *Kiranas* over organized retailers and may pose a serious threat in the near future.

7. *Home delivery* is a special facility provided by *Kiranas* to manage relationships with their customers. Some of the organized retailers like Subhiksha who have positioned themselves as convenience outlets are successfully leveraging home delivery facility to strengthen their customer base. They also converse telephonically with the consumers to make them aware about new schemes, discounts, and promotional offers from time to time.

Future Directions

An interesting study carried out by PriceWaterCoopers in Chennai, where modern trade in food and grocery had already captured an impressive 20 percent of the market share reveals some mind-boggling figures. Among the small retailers situated in close proximity to Food World of RPG group and Subhiksha, not a single one has actually closed down. The worst-scenario loss of topline due to competition was 25 percent, but still, the *Kiranas* were not in the Red! (Sen, 2005).

The proposition that *Kiranas* will die when modern trade comes in is in fact a myth. The two will co-exist. In fact, there should be healthy competition instead of conflict. Both will have competitive advantages. The *Kiranas* will have a low cost structure, convenient location, value adding services and most important customer intimacy while organized players will have product width and depth, dis-intermediation resulting in cost advantage and technology.

Despite the emergence of organized retailers in the Indian retail industry, the Indian consumers continue to be inclined towards the traditional *Kiranas*. Our Research findings imply that consumers are intrinsically indigenous in their buying behaviour although they haven't out rightly rejected the emergence of western influenced retail formats. In the words of Bikram Jit Rishi (2006), "Indians are one of the most discerning consumers in the World.

Even Luxury Brands have to design a unique pricing strategy in order to get a foothold in the Indian market. Indian consumers have a high degree of family orientation extending to family friends as well." This means that western influence cannot sway the Indian consumer as they are more traditional and loyal to friendly neighbourhood *Kiranas*.

If we go by the behavioural aspects of the consumers, scientists have found with reference to 'attitude' a paradox. Although the people have shown great curiosity and interest in big retail shops, their inclination is evidently towards the traditional *Kiranas*.

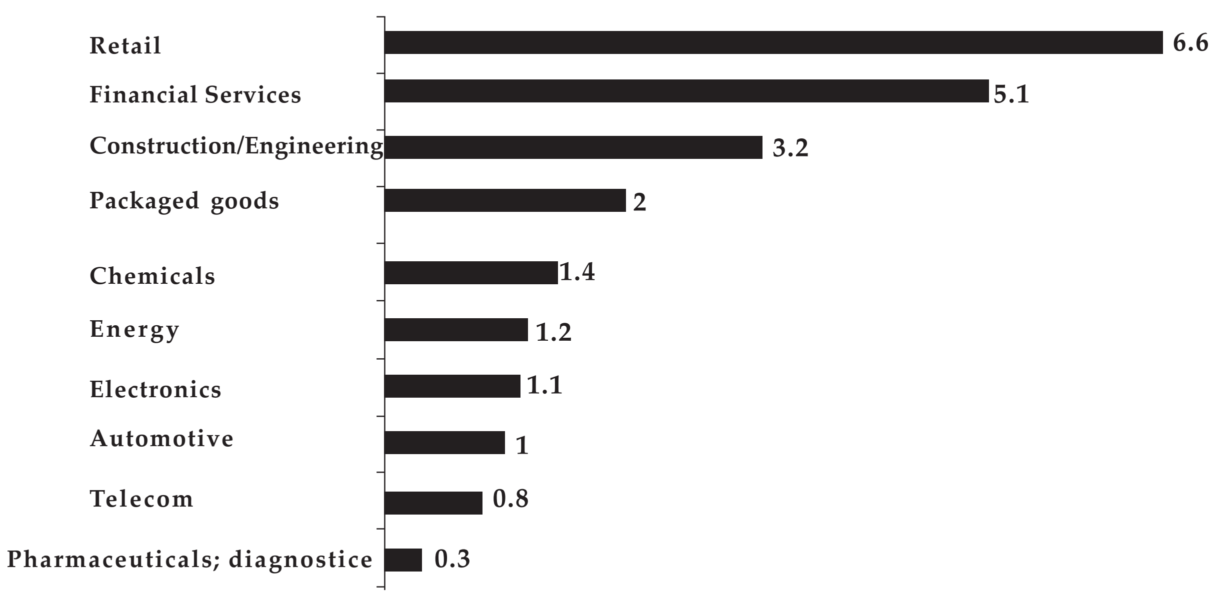
According to psychologists, effect of *self-image* on consumer behaviour cannot be ignored. While holding self-image about his own choices and values, the consumer also assesses and perceives images of the place of purchase. In this context, the consumer's relationship with the *Kirana* and other factors like the degree of familiarity and convenience result into a positive affinity with the *Kiranas*.

In spite of all odds, the *Kiranas* have proved themselves to exist in dignity in the heart of Indian consumers. It is mainly due to strong behavioural relationship bond that exists between the consumers and the *Kiranas* since ages. From the behavioural science perspective, the relationship bond existing between them is perhaps conditioned and as a result, it is difficult to change it completely.

As per our qualitative research, the emergence of organized retailers in the Indian retail industry has brought about a retail revolution in the country but not a radical change in the shopping behaviour of consumers. This is because of the initiatives taken by Kiranas to realign themselves against the new reality to retain their customers.

In conclusion, a *Kirana store* by and large should focus on providing customized services or personalized services, catering to buyers who seek convenience not pricing and bulk Discounts. The *Kiranas* or *Dukandars* of India are here to stay no matter what *Management Gurus* or industry experts say. Their business will not become obsolete. The current mood of the *Kirana* owners can be best described by the title of a popular movie; "No Retreat No Surrender..!" Big retailers....BEWARE...and BE...AWARE!

Table 1



Source: Euromonitor, European Chemical Industry Council: Automotive News; Wall Street Journal; Chemical market Reporter; IDATE; Global Vantage.

Table 2

Parameter	China 1996	China 2003	India 2005
Per capita GDP (USD)	675	1,109	710
Size of retail market (USD billion)	225	400	215
Share of organised trade (per cent)	7-8	~17	< 4

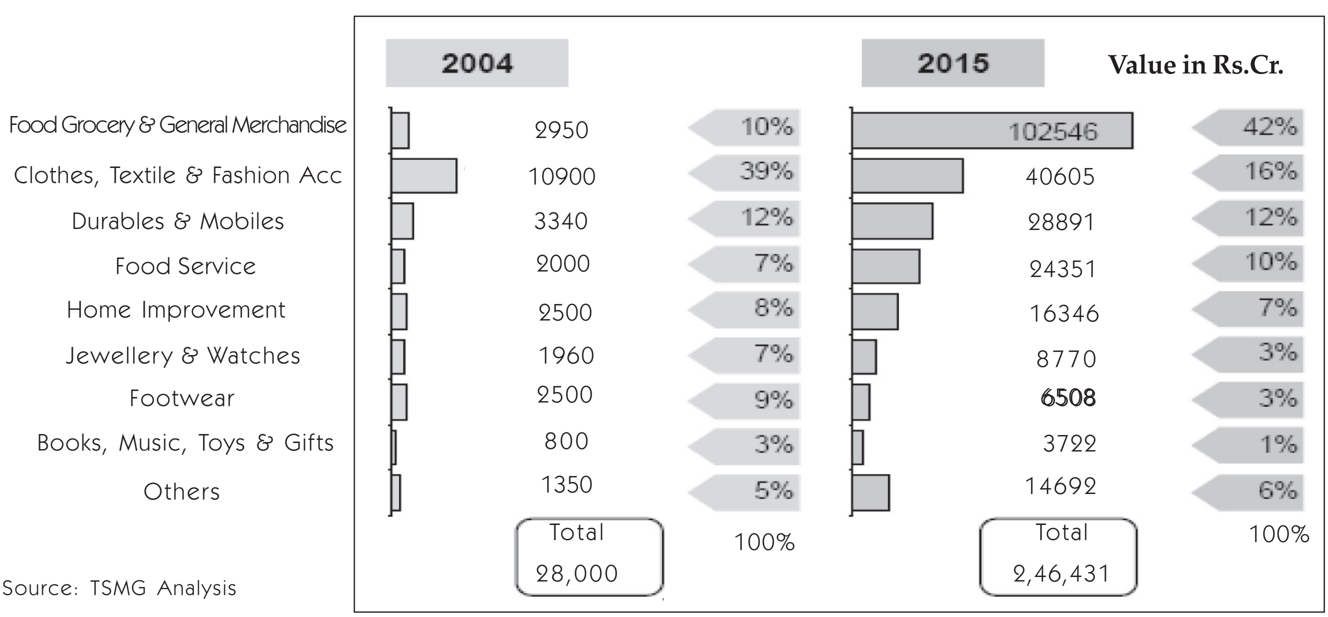
Source: TSMG, 2006

Table 3

Country	Share of organised trade (per cent) (2003)
India	4
China	17
Poland	20
Indonesia	30
Russia	33
Brazil	35
Thailand	40
Malaysia	55
USA	85

Source: TSMG, 2006

Organised Retail Market in India (Rs.Cr.)



Source: TSMG Analysis

Table 5

Region / Country	Number of retailers accounting for 20 per cent of market share	
	1990	2005
US	30	8
Europe	37	10

Source: TSMG, 2006

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Nifty Returns: Replication

Krishna Prasanna P.

This Research paper attempts to test the hypothesis whether the nifty stock index can be replicated by forming a portfolio consisting of 15 to 20 stocks selected on the basis of market capitalisation. It is also analysed whether such a portfolio is able to optimise risk and return in comparison with the NIFTY. The performance of the portfolio and the tracking error for three holding periods has been analysed. It is observed that Portfolio consisting of top 15 (also 20 stocks) stocks of NIFTY is able to replicate NIFTY. The tracking error is minimum, and less than 1.5 percent with 1-month holding period.

Finance Literature exhaustively covers the portfolio management strategies to understand asset pricing models. Business consultants and practitioners explore the portfolio strategies to detect abnormal returns in certain asset groups. Over the past decade, various models have been used by Investors for portfolio construction. Opinions about which return factors should be included in such models vary widely from practitioner to practitioner, yet a common characteristic in most models is that the factor weightings are determined by linear regression.

With the bounce in the markets, it is evident that fund managers and many brokers are trying to beat the market. It is common practice for the index funds to replicate the Index returns. We here by embark on an attempt to check what would be the size of the portfolio to replicate the NIFTY returns. Will the top 15 stocks or 20 stocks be able to replicate the performance of NIFTY or will they beat the market?

Dr.P.Krishna Prasanna, Assistant Professor, Icfai Business School, Harini Tower, No.7, Conran Smith Road, Gopalapuram, Chennai-600 086, Email: krishnap@ibsindia.org

This research paper attempts to test the hypothesis whether the nifty stock index can be replicated by forming a portfolio consisting of 15 to 20 stocks selected on the basis of market capitalisation. It is also analysed whether such a portfolio is able to optimise risk and return in comparison with the NIFTY. The performance of the portfolio and the tracking error for three holding periods has been analysed.

Organization of the Paper

After the introduction, review of literature is discussed in section I, empirical model and variables were explained in section II, Results in section III, and findings and concluding remarks in Section IV.

Section I: Review of Literature

Brush, John S. and Schock, Varilyn K. examined an alternative approach to multifactor portfolio construction that permits inclusion of portfolio risk considerations and constraints in the optimization process. They demonstrated the benefits of an integrated portfolio optimization approach over traditional regression model. Vaihekoski, Mika discussed portfolio returns calculation in the emerging markets and documented the factors that affect portfolio construction.

Bersimas, Dimitris and Darnell, Christopher examined the use of mixed-integer-programming (MIP) methods to construct portfolios adopted by Grantham, Mayo, Van Otterloo and Company. They developed an approach for portfolio construction that leads to a more consistent implementation of market views and to more balanced portfolios incorporating several important diagnostic tools.

Rudd, Andrew quoted that out of the available portfolio construction methods optimization is generally applicable and delivers the better portfolios. They asserted that Stratified sampling should only be used with highly concentrated indices. Block, Frank E. explored the elements of portfolio construction and highlighted that return, risk that is expressed as variability of return and diversification are deeply intertwined and possess interrelationship with several other elements.

Elton, Edwin J. and Gruber, Martin J. have derived implementable set of rules under which a central decision maker can make optimal decisions without requiring decentralized decision makers to reveal estimates of security returns. Vaihekoski, Mika explained that features like low liquidity, multiple stock series, and changes in foreign ownership restrictions greatly affect portfolio construction.

Lloyd, William P. Hand, John H. Modani, Naval K. examined the effect of portfolio construction rules on the relationship between portfolio size and effective diversification. Shefrin, Hersh examined the implications of the Behavioural Portfolio Theory (BPT) for portfolio construction and security design. They compared the BPT efficient frontier with the mean-variance efficient frontier and explored Integration of portfolios into a single mental account. Bernstein Quantitative Handbook mentioned information on model portfolios for large capitalization stocks. The book also explained determination of factors in constructing the portfolio by the size of expected-return differentials in the market.

Hague, Brian discussed ways of determining investment objectives in portfolio management. They quoted Yield enhancement as the portfolio's final objective. Sushil Kumar Mehta analyzed ex ante performance of the portfolios constructed using Markowitz's mean-variance model in the Indian security market. Weekly data on market prices of shares and the BSE SENSEX was collected for a period of seven years. The author has used various methods to evaluate the portfolios thus formed.

After an extensive literature review, we learnt that that study of portfolio theories in the Indian context was minimal. Articles on Markowitz revisited in Indian Context (2005) concentrated on static performance of 54 portfolios and left space for more such work. We wanted to check the relevance of passive management in the latest context, using historical data of 19 months to examine how frequently the investor should revise his portfolio.

Section-II: Research Methodology

Modern portfolio theory explains how investors can optimize the returns by diversifying the portfolios. It explains how risk is priced in the market. There are many well developed models to understand asset pricing behaviour- Markowitz diversification, the efficient frontier, capital asset pricing model, the alpha coefficient and beta coefficient, the Capital Market Line and the Securities Market Line etc. These models consider returns as a variable dependent on weighted combination of assets in the portfolio. In any constructed portfolio an investor would like to take the additional risk only if he is adequately compensated for that additional risk. Similarly any investor who aspires for higher returns should also be willing to take additional risk. The concept of risk is refers to volatility and is measured through the standard deviation.

$$E(R_p) = \sum_i w_i E(R_i)$$

Expected return: .....(1)

The variance of the portfolio will be the sum of the product of every asset pair's weights and covariance, σ_{ij} this sum includes the squared weight and variance σ_i (or σ_i^2) for each individual asset. Covariance is often expressed in terms of the correlation in returns between two assets ρ_{ij} where $\sigma_{ij} = \sigma_i \sigma_j \rho_{ij}$

Portfolio variance

$$\sigma_p^2 = \sum_i \sum_j \omega_i \omega_j \sigma_{ij} = \sum_i \sum_j \omega_i \omega_j \sigma_i \sigma_j \rho_{ij} \qquad .....(2)$$

Portfolio volatility:

$$\sigma_p = \sqrt{\sigma_p^2} \qquad .....(3)$$

For a two asset portfolio:

Portfolio return:

$$E(R_p) = \omega_A E(R_A) + (1-\omega_A) E(R_B) = \omega_A E(R_A) + \omega_B E(R_B) \qquad .....(4)$$

Portfolio variance:

$$\sigma_p^2 = \omega_A^2 \sigma_A^2 + \omega_B^2 \sigma_B^2 + 2\omega_A \omega_B \rho_{AB} \sigma_A \sigma_B \qquad .....(5)$$

For a three asset portfolio, the variance is:

$$\omega_A^2 \sigma_A^2 + \omega_B^2 \sigma_B^2 + \omega_C^2 \sigma_C^2 + 2\omega_A \omega_B \rho_{AB} \sigma_A \sigma_B + 2\omega_A \omega_C \rho_{AC} \sigma_A \sigma_C + 2\omega_B \omega_C \rho_{BC} \sigma_B \sigma_C \qquad .....(6)$$

The computation becomes very comprehensive when the portfolio is a combination of many assets. Generally portfolio computations are made using software.

Diversification

Portfolio risk can be reduced by holding assets that are not perfectly correlated that is to say that the correlation coefficient should not be equal to 1. In such a case portfolio volatility will be less than that of weighted average volatility of individual assets. Risk of individual assets gets reduced when the portfolio is diversified. With the help of diversification we can earn the same return with the reduced risk.

Portfolio Performance Measures

The portfolio is evaluated using various performance measures. The simplest of all measures is the tracking error. There are more objective measures like the Sharpe's ratio, Treynor's Ratio, Jenson's Alpha and Fama Ratio. We have used Sharpe's and Treynor's Ratios for evaluating portfolio risk.

Sharpe Ratio

Sharpe ratio is used to measure the risk adjusted performance of an asset in a portfolio. The formula for calculating the ratio as given in source wikipedia website is

$$S = \frac{E[R-Rf]}{\sigma} \qquad .....(7) \qquad\qquad \sigma = \sqrt{Var[R-Rf]} \qquad .....(8)$$

The Sharpe ratio explains to what extent the risk is compensated by the return. Higher Sharpe ratio implies that for the same risk, return is high for that asset. Generally investors choose the stocks with high Sharpe ratios.

Treynor's Ratio

Treynor's ratio measures excess returns earned on a specific asset over the return that would have been earned on a risk less Investment. Higher Treynor's ratio implies superior performance of the asset. Generally Treynor's ratio is used to rank the assets in the portfolio.

$$T = \frac{\gamma_p - \gamma_f}{\beta} \qquad .....(9)$$

Where

$T \equiv$ Treynor's ratio,

$\gamma_p \equiv$ Portfolio return,

$\gamma_f \equiv$ Risk free rate

$\beta \equiv$ Portfolio beta

Objectives of the Paper

a) To test the hypothesis that the nifty stock index can be replicated by forming a portfolio consisting of only 15 or 20 stocks (selected on the basis of market capitalisation)

b) To check if such a portfolio is able to optimise risk and return in comparison with the NIFTY

The Paper attempted to

§ Analyse the historical performance of the scrip for different holding periods

§ Assign weights to form a portfolio

§ Analyse how volatility of the scrip affects the performance of portfolio

§ Estimate of relative scrip volatility with respect to the index

§ Estimate of correlation of scrip returns with index returns

§ Check for tracking error of the portfolio for different holding periods

§ Compare performance of the portfolio with that of the index

Choice of Time Period

There were major changes in the composition of Nifty during the recent years. During the period 2005-2006 the following changes were made:-

Changes to S&P CNX Nifty

Date of Inclusion	Securities Included	Securities Excluded
01-Sep-06	RCOM	TATATEA
27-Jun-06	SUZLON	SCI
27-Jun-06	SIEMENS	TATACHEM
26-Sep-05	JETAIRWAYS	COLGATE
25-Feb-05	TCS	INDHOTEL

The most important change in Nifty was inclusion of TCS in Feb 2005, which is one of the top five stocks. Hence the period of analysis of the portfolio is restricted to March 2005 – September 2006 (19 months).

Sample Portfolio Construction

The selection of scrip is dependent on the availability of the data for reasonable period (two years) enough to substantiate the analysis. This would eliminate the stocks that are the part of nifty but are recently listed.

The Top 15 stocks in NIFTY account for close to 67 percent of the weights as on September 2006 and the top 20 stocks in NIFTY account for 75 percent of the total weightages. The Top 20 stocks of the Nifty have been chosen with some exceptions. Stocks like Bharti Airtel (Code: BHARTIARTL), Reliance Communication (Code: RCOM) and Suzlon Energy (code: SUZLON) have been excluded from the portfolio formed. These have been recent additions to nifty and due to insufficiency of data on these stocks they have been excluded in the portfolio formation. The chosen stocks are listed below:

Sources of Data

Weights of top 20 stocks as on September 2006 and Historical closing prices of NIFTY and the stocks for the period March 2005 to September 2006 have been collected from NSE's Website (nseindia.com). Historical weights of these 20 stocks from March 2005 to September 2006 have been collected from *The Economic Times* online edition (epaper.indiatimes.com).

The weights of the stocks in Nifty change on a daily basis. But for the purpose of the weights to be assigned in the portfolio to be formed, evaluation would be difficult if we change the weights on a daily basis. So depending on the holding periods the weights are assigned. For instance, the weights assigned for one month holding period will be that of the first trading day of the month. Similarly for a two month holding period, the weights in nifty as on the first trading day would hold good for two months.

Abnormal Changes in Stock Prices

There have been some drastic falls in stock prices of individual stocks owing to issue of bonus shares or stock splits. The prices have been influenced by the bonus issue or stock split only for the month in which the event occurred. This has an impact of high negative returns for that period. There is no adjustment made to correct these abnormal changes. This is a major limitation of the study. Such major events are mentioned below:

ITC - September 05
WIPRO - August 05
LARSEN and TOUBRO - September 06
INFOSYS - July 06
TCS - July 06

Asset Allocation

As the aim of the research is to verify if replication of the benchmark (NIFTY) is possible with the help of a sample portfolio, the asset allocation is based on the index replication method. In other words, we are adopting passive portfolio management technique. The portfolio ignores allocation to any other type of financial asset. It consists only of equity. Hence, non-diversifiable risk, i.e., the market risk related to equity markets exists.

Frame Work of Analysis

The data analysis has been done in the following *four perspectives:*

- Performance of the individual stocks and the portfolio -Calculations for three different holding periods
  - Of the scrip – beta, variance, standard deviation, return
  - Of the index – variance, standard deviation and return
  - Of the portfolio – beta, variance, standard deviation, return, tracking error, volatility, correlation relation analysis
- Calculation of the tracking error to verify the extent of correlation between the returns of NIFTY and portfolio to understand need for portfolio revision
- Regression analysis of the portfolio with respect to the benchmark (NIFTY) to verify the extent of replication possible of the portfolio as a proxy to NIFTY
- Evaluation of Portfolio from the risk perspective using Sharpe's and Treynor's ratio

Section - III: Empirical Results

Portfolio Returns vs Nifty Returns

In both the sample portfolios the portfolio returns were closer to or greater than the nifty returns. Table 1(a,b,c) presents the results of the analysis with graphs. Portfolio returns were equal or exceeded the market returns ten times out of 19 months for one-month holding period in case of 15 stocks sample. The standard deviation of the portfolio is less than that of nifty returns in case of 13 out of 19 months observation. This infers the volatility of portfolio is less than that of Nifty. Tracking error is less than 1.5 in case of 14 out of 19 months. For two months holding period the returns are either equal or greater for 7 out of 9 periods. Tracking error is also largely less than 1.5. However the volatility is greater. For three months holding period the portfolio returns are greater, volatility is greater, tacking error is also high.

In case of the sample portfolio of 20 stocks the portfolio returns far exceeded nifty return. Portfolio performance is superior to market in case of (63.15 percent) 12 months out of 19 months. Standard deviation is greater than nifty inferring greater volatility. Tracking error is less than one in most of the months. Thus though portfolio is able to replicate nifty returns it does not replicate the risk in terms of volatility. For two months or three months holding period also portfolio returns are greater but the volatility and tracking error also are greater.

In case of portfolio of 15 stocks the port folio is not diversified and holding period of one month is observed to be better. In case of 20 stocks, portfolio was superior to market in case of all holding periods. When the market experiences negative returns 20 stock sample portfolio is able to beat the market three times out of five occasions.

Tracking error is the measure to understand how closely the portfolio follows the index. It is measured as the standard deviation of the difference between the portfolio and index returns. It is observed from the graph presenting the tracking error trend tracking error is less than or close to 1.5 percent for one month holding period. Tracking error is less in case of portfolio of 20 stocks compared to 15 stocks for one month holding period. For the holding period of two months and three months tracking error is high in case of portfolio of 20 stocks. But interestingly portfolio outperformed Nifty during the period of crash. In the month of January 2006, Reliance stock crashed by more than 20 percent which has significant weightage in the portfolio. The tracking error exceeded 1.5 percent around that time.

The portfolio beta describes the relative sensitivity of the portfolio as against market benchmark index. Portfolio beta values are presented in table 2 (a,b,c) for 15 stocks portfolio and table 3 (a, b, c) for the portfolio of 20 stocks. The computed values explain that the beta value for the 20 stocks portfolio is closer to 1 in case of one month holding period and it is much less than one in case of two month and three-month holding period. Beta measures the sensitivity of portfolio compared to market returns. Beta greater than 1 implies that the change in portfolio return (positive or negative) will be greater than the given change in market return. The slope of regression line (Beta) is slightly less than 45 degrees, which indicates that 1 percent change in the return of NIFTY will result in 0.98 percent change in return of portfolio. There is significant positive correlation between portfolio and nifty returns.

It is thus observed from this sample study that an investor can invest in the top 20 stocks and replicate the nifty returns for 1-month holding period. The sensitivity of such a portfolio is moderate for one-month holding period. The changes in market capitalization weightages of nifty index are dynamic and require revision of the portfolio once in a month.

Evaluation of Portfolio Risk

The concept of portfolio measurement and the relevance of ratios like the Sharpe's and Treynor's have been dealt in detail earlier. The ratios were computed for both the sample portfolio and the benchmark portfolio, i.e., NIFTY. A difference was calculated to understand if the sample portfolio earned higher returns for the additional risk taken. The detailed calculations are annexed in table Five and Six.

Sharpe's Ratio

According to Sharpe's ratio analysis for 1-month holding period portfolio of 20 stocks, market has out-performed portfolio 10 times out of 19. This shows that if we consider return/ risk for evaluating the performance of portfolio, we find that performance of portfolio and NIFTY is comparable. In other words Portfolio is able to replicate NIFTY.

According to Sharpe's ratio analysis for 2-month holding period portfolio, market has out-performed portfolio 6 times out of 9. The results from analysis indicate that total risk of the portfolio was adequately compensated as duration of holding period increases. According to Sharpe's ratio analysis for 3-month holding period portfolio, market has out performed portfolio 3 times out of 6.

Treynor's Ratio

According to Treynor's ratio analysis for 1-month holding period portfolio, 20 stock portfolios has out-performed market 12 times out of 19. For 2-month holding period, portfolio has out performed market 6 times out of 9. According to Treynor's ratio analysis for 3-month holding period portfolio, portfolio has out-performed market 4 times out of 6. There is very small difference in performance of the portfolio and market. So we can see that portfolio and NIFTY have performed equally well.

Comparison of Performance Measures (Sharpe's vs Treynor's)

By comparing results of Sharpe's ratio and Treynor's ratio, we find that 20-stock portfolio is also not adequately diversified (sector specific). There is need for additional diversification. We find that Treynor's ratio is providing better results for portfolio than Sharpe's ratio. This indicates that magnitude of diversifiable risk is significantly high in portfolio.

Diversification Aspect

If a comparison of sectoral allocation is done of the nifty and the sample portfolio, it can be noted (table 7) that there is excessive allocation to two sectors – computer software and the oil refineries. Any drastic change in the stocks of these sectors, affects the performance of the sample portfolio. There are instances of steep dips in the prices of the stocks that affect the performance of the sample portfolio and hence it was not able to beat the benchmark, i.e., the nifty in the performance or the returns. Such high allocations can be evened out if there is an increase in proportions of the other sectors, which are negatively correlated with the above-mentioned sectors.

Section-IV
Concluding remarks

The sample portfolios are able to replicate the performance of Nifty Index in most of the instances. It has been observed that there is significant positive correlation between the sample portfolio and nifty in one month holding period. The general observations are -

- Both the Portfolios consisting of top 15 and 20 stocks of NIFTY are able to replicate NIFTY returns for one month holding period.
- The tracking error is less than 1 for the sample portfolio of 20 stocks.
- The beta of the portfolio is closer to one reflecting that the sensitivity of the portfolio is not very high.
- The volatility of sample portfolios is higher than the nifty Index.
- Portfolio is able to beat the market whenever market has crashed.
- The diversification of constructed sample portfolios is not adequate.

Measurement of portfolio using the tracking error showed that the portfolio returns in some cases have surpassed that of the index. But the sample portfolio is not completely diversified as the market index, making it prone to diversifiable risk. It is essential to examine whether this increased risk has been compensated with increase in returns. This can be understood using performance measures like the Sharpe's ratio and Treynor's ratio. As the portfolio is not adequately diversified, the Sharpe's ratio is a better measure of performance of the sample portfolio. Interpreting the Sharpe's ratio (a difference between the portfolio and benchmark), it is evident that the two month holding period provides adequate returns for every additional unit of risk taken.

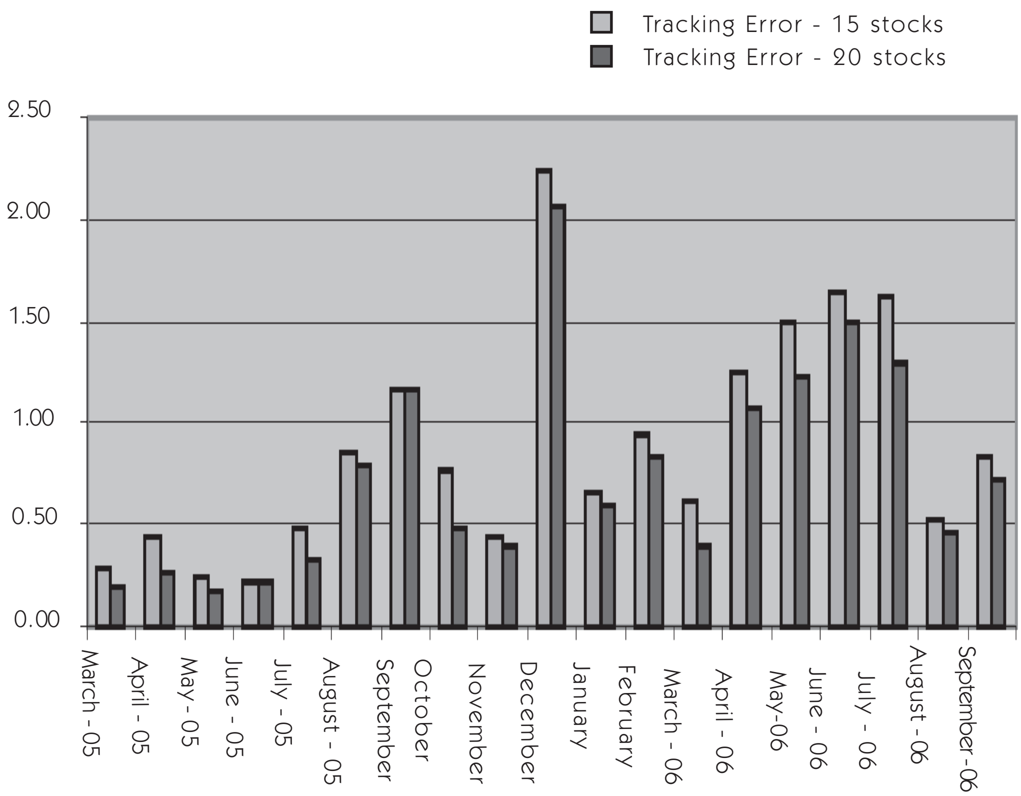
Replication is possible in one month compare to other holding periods. This is evident from the tracking error analysis. This highlights the fact that the portfolio requires constant revision at regular intervals. Three months is too long a period for portfolio revision. This methodology, though on the face of it is a passive management strategy, it advocates the investor to actively track the portfolio.

Table-1a – Portfolio Returns vs Market Returns for one month holding Period

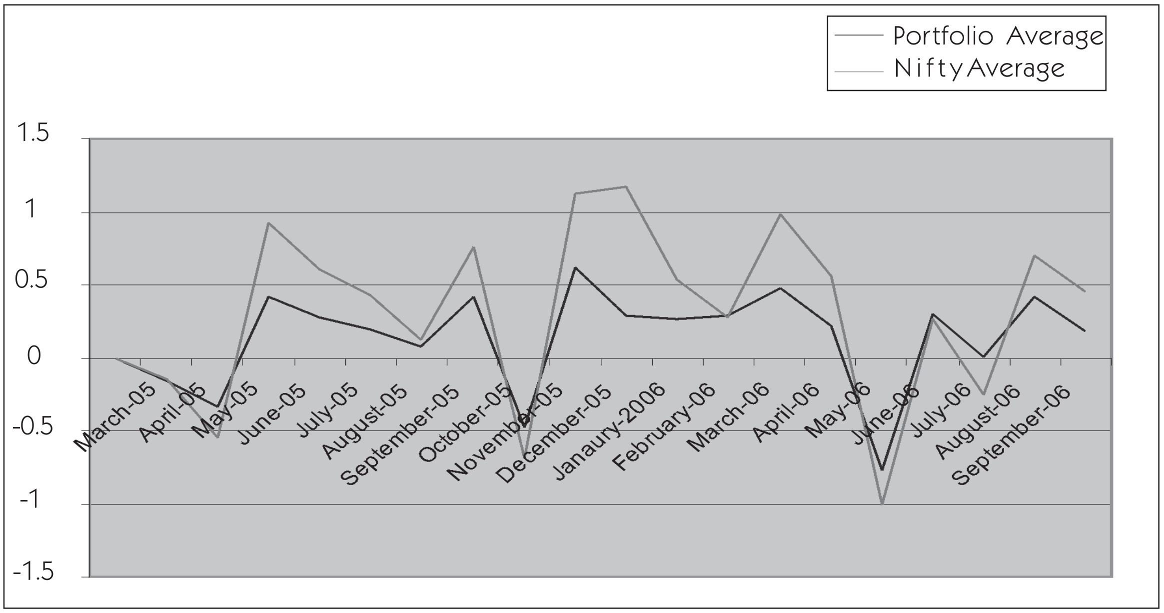
	Nifty Returns		Portfolio Return 15 stocks			Portfolio Return-20 stocks		
			1mth- holding		Tracking	1 mth holding		Tracking
Date	Average	Std Dev	Average	Std Deviation	Error	Average	Std Dev.	Error
March-05	-0.16	1.08	-0.20	1.07	0.28	0.02	1.10	0.19
April-05	-0.33	1.22	-0.99	1.32	0.45	-0.21	1.28	0.26

May-05	0.42	0.66	0.62	0.63	0.24	0.50	0.73	0.19
June-05	0.27	0.73	0.18	0.72	0.22	0.33	0.83	0.21
July-05	0.20	0.93	0.34	0.98	0.49	0.23	0.97	0.34
August-05	0.08	0.99	0.18	1.33	0.86	0.04	1.28	0.79
September-05	0.42	1.19	0.45	1.56	1.17	0.34	1.65	1.16
October-05	-0.48	1.50	-0.58	1.33	0.77	-0.21	1.33	0.49
November-05	0.61	0.99	0.49	0.91	0.45	0.51	0.88	0.39
December-05	0.29	1.08	0.91	2.50	2.23	0.88	2.37	2.05
Janaury-2006	0.27	0.94	0.17	0.64	0.65	0.26	0.60	0.60
February-06	0.29	0.82	0.04	1.25	0.95	-0.01	1.18	0.83
March-06	0.48	0.96	0.61	0.67	0.62	0.50	0.79	0.39
April-06	0.21	1.62	0.37	1.37	1.26	0.34	1.53	1.08
May-06	-0.77	2.97	-0.37	1.80	1.50	-0.24	1.94	1.22
June-06	0.31	2.98	-0.12	1.82	1.64	-0.03	1.93	1.48
July-06	0.00	1.88	-0.21	1.61	1.62	-0.26	1.81	1.30
August-06	0.42	0.70	0.17	0.55	0.53	0.28	0.61	0.45
September-06	0.18	1.11	0.34	0.85	0.83	0.28	0.95	0.73

Tracking Error for 15 and 20 stock portfolios



Portfolio of 15 stocks vs Nifty- Returns for 1 month holding period



Portfolio of 20 stocks vs Nifty- Returns for 1 month holding period

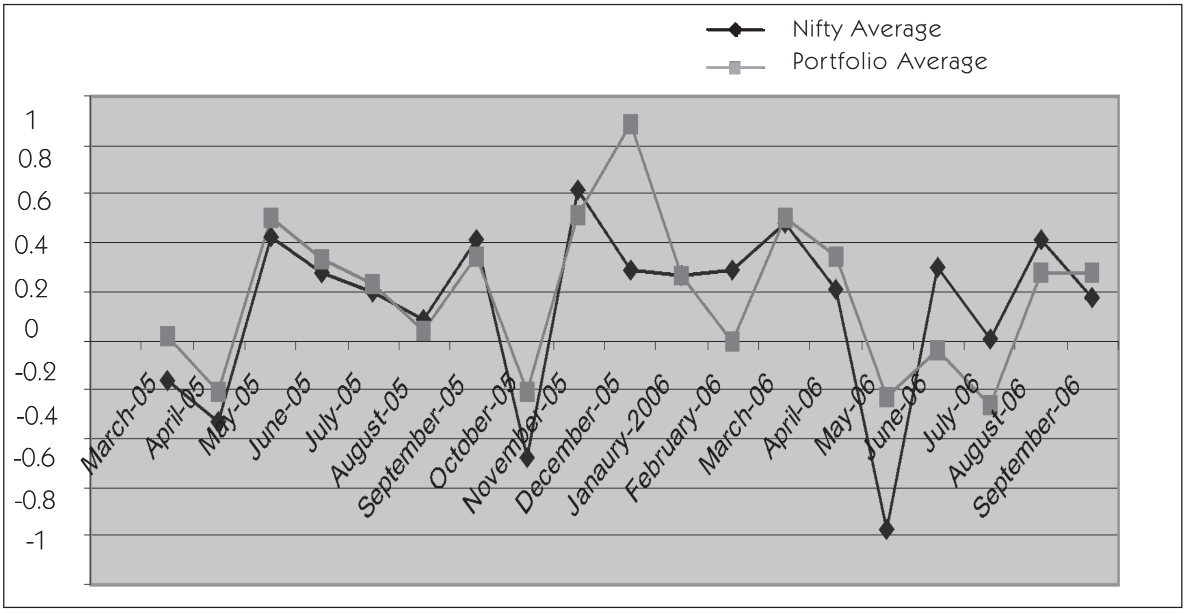


Table-1b – Portfolio Returns vs Market Returns for two months holding Period

	Nifty Returns		Portfolio Return-15 Stocks 2 months holding		Tracking	Portfolio Return-20 stocks 2 mth holding		Tracking
Dates	Average	Std Dev.	Average	Std Dev	Error	Average	Std Dev.	Error
Apr-May-05	-0.24	1.14	-0.14	1.32	1.51	-0.14	1.20	1.36
Jun-July05	0.31	0.69	0.27	0.85	1.04	0.31	0.83	0.98
AugSep-05	0.17	0.96	0.30	1.51	1.72	0.31	1.47	1.63
Oct-Nov-05	-0.03	1.35	-0.04	1.28	2.06	-0.05	1.27	1.99
Dec-Jan-05	0.45	1.12	0.59	1.91	2.44	0.62	1.72	2.25
Feb-March-06	0.28	0.85	0.34	0.99	1.09	0.29	1.14	1.15
Apr-May 06	0.36	1.28	-0.06	1.60	2.05	-0.02	1.86	2.17
Jun- July06	-0.30	3.04	-0.16	1.71	3.63	-0.11	1.82	3.37
Aug-Sep06	0.22	1.47	0.21	0.77	1.71	0.19	1.04	1.70

Table-1c – Portfolio Returns vs Market Returns for 3 months holding Period

	Nifty Returns		Portfolio Return-15 Stocks 3 months holding		Tracking	Portfolio Return-20 stocks 3 mth holding		Tracking
Dates	Average	Std Dev.	Average	Std Dev	error	Average	Std Dev.	Error
A-M-J-05	-0.02	1.04	-0.03	1.14	1.32	-0.01	1.15	1.35
J-A-S-05	0.18	0.89	0.33	1.39	1.60	0.33	1.39	1.59
O-N-D-05	0.22	1.31	0.28	1.72	2.35	0.27	1.53	2.19
J-F-M-06	0.26	0.93	0.30	0.91	1.16	0.28	1.00	1.23
A-M-J-06	-0.09	2.12	-0.07	1.85	2.83	-0.04	2.02	2.80
J-A-S-06	0.27	2.12	0.05	1.16	2.51	0.07	1.38	2.58

Table-2a

Regression Statistics for 1 month holding period 15 stocks

	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
March-05	0.97	0.93	0.93	0.96	16.55	0.00
April-05	0.94	0.88	0.88	1.01	11.75	0.00
May-05	0.93	0.87	0.86	0.89	11.43	0.00
June-05	0.96	0.91	0.91	0.94	14.80	0.00
July-05	0.87	0.75	0.74	0.92	7.44	0.00
August-05	0.76	0.58	0.56	1.03	5.25	0.00

September-05	0.67	0.45	0.42	0.88	3.94	0.00
October-05	0.86	0.73	0.72	0.76	7.06	0.00
November-05	0.89	0.80	0.79	0.82	8.44	0.00
December-05	0.68	0.46	0.43	0.40	4.12	0.00
Janaury-2006	0.72	0.52	0.49	0.49	4.42	0.00
February-06	0.66	0.43	0.40	1.00	3.59	0.00
March-06	0.77	0.59	0.57	0.54	5.41	0.00
April-06	0.66	0.43	0.40	0.56	3.60	0.00
May-06	0.92	0.84	0.83	0.56	10.54	0.00
June-06	0.87	0.76	0.75	0.53	8.27	0.00
July-06	0.58	0.34	0.30	0.50	3.10	0.01
August-06	0.66	0.44	0.41	0.52	3.96	0.00
September-06	0.67	0.45	0.41	0.51	3.60	0.00

Table-2b

Regression Statistics for 2 month holding period-15 Stocks

Dates	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
Apr-May-05	0.25	0.06	0.04	0.29	1.65	0.11
Jun-July-05	0.08	0.01	-0.02	0.10	0.53	0.60
AugSep-05	0.09	0.01	-0.02	0.14	0.55	0.58
Oct-Nov-05	0.22	0.05	0.03	-0.21	-1.42	0.16
Dec-Jan-05	0.24	0.06	0.03	-0.40	-1.57	0.13
Feb-March-06	0.31	0.09	0.07	0.35	2.00	0.05
Apr-May -06	0.00	0.00	-0.02	0.00	-0.01	0.99
Jun- July -06	0.10	0.01	-0.01	-0.06	-0.64	0.53
Aug-Sep -06	0.07	0.00	-0.02	0.29	1.65	0.11

Table-2c

Regression Statistics for 3 month holding period-15 Stocks

Dates	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
A-M-J-05	0.27	0.07	0.06	0.30	2.23	0.03
J-A-S-05	0.07	0.00	-0.01	0.11	0.54	0.59
O-N-D-05	0.18	0.03	0.02	-0.24	-1.46	0.15
J-F-M-06	0.20	0.04	0.02	0.19	1.56	0.12
A-M-J-06	0.02	0.00	-0.02	-0.01	-0.13	0.90
J-A-S-06	0.10	0.01	-0.01	-0.06	-0.78	0.44

	Table-3 a					
	Regression Statistics for 1 month holding period -20 staocks					
	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
March-05	0.99	0.97	0.97	1.00	25.84	0.00
April-05	0.98	0.96	0.96	1.02	20.96	0.00
May-05	0.97	0.94	0.94	1.07	17.51	0.00
June-05	0.97	0.94	0.94	1.09	18.08	0.00
July-05	0.94	0.88	0.87	0.98	11.43	0.00
August-05	0.79	0.62	0.60	1.02	5.70	0.00
September-05	0.71	0.50	0.48	0.99	4.40	0.00
October-05	0.95	0.89	0.89	0.84	12.38	0.00
November-05	0.92	0.85	0.84	0.82	9.97	0.00
December-05	0.50	0.25	0.21	1.08	2.59	0.02
Janaury-2006	0.75	0.56	0.53	0.50	4.74	0.00
February-06	0.72	0.51	0.49	1.05	4.24	0.00
March-06	0.91	0.83	0.82	0.78	9.84	0.00
April-06	0.78	0.61	0.58	0.70	4.99	0.00
May-06	0.93	0.86	0.86	0.65	11.27	0.00
June-06	0.96	0.92	0.92	0.57	15.82	0.00
July-06	0.75	0.57	0.55	0.72	5.01	0.00
August-06	0.79	0.62	0.60	0.66	5.70	0.00
September-06	0.74	0.54	0.52	0.66	4.75	0.00

	Table-3b					
	Regression Statistics for 2 month holding period-20 stocks					
	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
April—May 05	0.14	0.02	-0.01	0.15	0.76	0.45
June—July 05	0.17	0.03	0.01	0.21	1.12	0.27
Aug.—Sept. 05	0.15	0.02	0.00	0.23	0.96	0.34
Oct.—Nov. 05	0.15	0.02	0.00	-0.14	-0.93	0.36
Dec—Jan 06	0.21	0.05	0.02	-0.33	-1.39	0.17
Feb.—Mar. 06	0.35	0.13	0.10	0.49	2.37	0.02
April—May 06	0.10	0.01	-0.02	0.14	0.60	0.55
June—July 06	0.07	0.00	-0.02	0.04	0.46	0.65
Aug.—Sept. 06	0.20	0.04	0.02	0.13	1.30	0.20

	Table-3c					
	Regression Statistics for 3 month holding period-20 Stocks					
Dates	Multiple R	R Square	Adjusted R Square	Beta	T-value	pvalue
A-M-J-05	0.24	0.06	0.04	0.27	1.96	0.05
J-A-S-05	0.07	0.01	-0.01	0.11	0.56	0.58
O-N-D-05	0.19	0.04	0.02	-0.22	-1.50	0.14
J-F-M-06	0.19	0.04	0.02	0.21	1.53	0.13
A-M-J-06	0.05	0.00	-0.01	0.05	0.38	0.70
J-A-S-06	0.01	0.00	-0.02	0.00	0.05	0.96

Table-4- Sample Portfolios			
Sample Portfolio with 15 stocks		Sample Portfolio with 20 stocks	
Sl. No.	Scrip's NIFTY	Sl. No.	Scrip's NIFTY
1	ONGC	1	ONGC
2	RELIANCE	2	RELIANCE
3	INFOSYSTCH	3	INFOSYSTCH
4	TCS	4	TCS
5	WIPRO	5	WIPRO
6	ITC	6	ITC
7	ICICIBANK	7	ICICIBANK
8	BHEL	8	BHEL
9	HINDLEVER	9	HINDLEVER
10	SBIN	10	SBIN
11	HDFC	11	HDFC
12	LT	12	LT
13	TATAMOTORS	13	TATAMOTORS
14	SAIL	14	SAIL
15	TATASTEEL	15	TATASTEEL
		16	BAJAJAUTO
		17	HDFCBANK
		18	MARUTI
		19	SATYAMCOMP
		20	GRASIM

Table-5: Sharpe's Ratio

One month holding period (20 Stocks)			1 month holding period (15 Stocks)		
PORTFOLIO	NIFTY	DIFF	PORTFOLIO	NIFTY	DIFF
(0.19548)	(0.42055)	0.22507	(0.15453)	(0.42055)	0.26602
(1.16530)	(1.23348)	0.06818	(1.19152)	(1.23348)	0.04196
1.15457	1.19850	(0.04392)	1.15583	1.19850	(0.04267)
0.88081	0.83332	0.04750	0.84241	0.83332	0.00910
0.36424	0.56931	(0.20507)	0.30554	0.56931	(0.26377)
0.25279	0.32954	(0.07675)	0.28425	0.32954	(0.04529)
1.09445	1.08648	0.00797	1.05442	1.08648	(0.03207)
(1.22363)	(1.50178)	0.27814	(1.22903)	(1.50178)	0.27274
1.22925	1.51699	(0.28774)	1.15871	1.51699	(0.35828)
0.77343	0.64979	0.12364	0.80017	0.64979	0.15038
0.22800	0.75415	(0.52615)	0.14856	0.75415	(0.60559)
0.38487	0.41563	(0.03076)	0.28277	0.41563	(0.13285)
1.06336	1.20381	(0.14045)	1.11073	1.20381	(0.09309)
0.31914	0.26535	0.05378	0.31275	0.26535	0.04740
(1.85636)	(2.21712)	0.36076	(1.76543)	(2.21712)	0.45170
0.70029	0.72231	(0.02201)	0.62858	0.72231	(0.09373)
(0.06579)	(0.11935)	0.05356	(0.13208)	(0.11935)	(0.01273)
0.92668	1.13267	(0.20599)	0.88336	1.13267	(0.24931)
0.43552	0.55679	(0.12127)	0.36667	0.55679	(0.19012)

2 month holding period (20 Stks)			2 month holding period (15 Stks)		
PORTFOLIO	NIFTY	DIFF	PORTFOLIO	NIFTY	DIFF
(0.91023)	(0.91720)	0.00698	(0.92768)	(0.91720)	(0.01048)
1.63776	1.64692	(0.00915)	1.64590	1.64692	(0.00102)
0.47228	0.47176	0.00051	0.47370	0.47176	0.00193
(0.09274)	(0.09287)	0.00013	(0.14722)	(0.09287)	(0.05435)
1.76814	1.75999	0.00815	1.76952	1.75999	0.00954
0.35048	0.34956	0.00092	0.21793	0.34956	(0.13163)
1.29716	1.31121	(0.01406)	1.34328	1.31121	0.03206
(1.23072)	(1.25036)	0.01964	(1.21585)	(1.25036)	0.03451
0.63967	0.64372	(0.00405)	0.62413	0.64372	(0.01959)

3 month holding period (20 Stocks)			3 month holding period (15 Stocks)		
PORTFOLIO	NIFTY	DIFF	PORTFOLIO	NIFTY	DIFF
0.69711	0.51520	0.18191	0.55032	0.51520	0.03512
1.53506	1.55416	(0.01910)	1.43224	1.55416	(0.12192)
0.74817	0.56142	0.18675	0.64800	0.56142	0.08658
1.40779	1.79527	(0.38748)	1.24542	1.79527	(0.54985)
(0.90417)	(1.24825)	0.34408	(0.99861)	(1.24825)	0.24963
0.99870	1.17506	(0.17636)	0.91688	1.17506	(0.25818)

Table - 6a							
TREYNOR'S RATIO							
1 Month Holding Period (20 Stocks)				1 Month Holding Period (15 Stocks)			
	T PORTFOLIO	T MARKET	DIFF		T PORTFOLIO	T MARKET	DIFF
1	-0.01596	-0.02922	0.01326	1	-0.01297	-0.02922	0.01625
2	-0.09575	-0.08571	-0.01004	2	-0.10064	-0.08571	-0.01493
3	0.09533	0.08328	0.01206	3	0.09833	0.08328	0.01506
4	0.0721	0.0579	0.0142	4	0.07088	0.0579	0.01298
5	0.03031	0.03956	-0.00925	5	0.0262	0.03956	-0.01336
6	0.02115	0.0229	-0.00175	6	0.02455	0.0229	0.00165
7	0.09149	0.07549	0.01599	7	0.0909	0.07549	0.01541
8	-0.10196	-0.10435	0.00238	8	-0.10574	-0.10435	-0.00139
9	0.10344	0.10541	-0.00196	9	0.10084	0.10541	-0.00456
10	0.06479	0.04515	0.01964	10	0.06933	0.04515	0.02418
11	0.01914	0.0524	-0.03327	11	0.01287	0.0524	-0.03953
12	0.03109	0.02888	0.00221	12	0.02348	0.02888	-0.0054
13	0.08476	0.08365	0.00112	13	0.09101	0.08365	0.00737
14	0.02558	0.01844	0.00714	14	0.02575	0.01844	0.00731
15	-0.15213	-0.15405	0.00192	15	-0.14935	-0.15405	0.0047
16	0.05822	0.05019	0.00803	16	0.054	0.05019	0.00381
17	-0.00548	-0.00829	0.00282	17	-0.01154	-0.00829	-0.00325
18	0.07715	0.0787	-0.00155	18	0.07609	0.0787	-0.00262
19	0.03652	0.03869	-0.00217	19	0.03187	0.03869	-0.00681

Table-6b: Treynor's Ratio						
2 Month Holding Period (20 Stks)				2 Month Holding Period (15 Stks)		
T PORTFOLIO	T MARKET	DIFF		T PORTFOLIO	T MARKET	DIFF
-0.09862	-0.0957	-0.00292	1	-0.1	-0.0957	-0.00556
0.17764	0.1718	0.00581	2	0.18	0.1718	0.00809
0.05131	0.0492	0.00209	3	0.05	0.0492	0.00265
-0.01008	-0.0097	-0.00039	4	-0	-0.0097	-0.00644
0.19233	0.1836	0.0087	5	0.19	0.1836	0.01051
0.0381	0.0365	0.00163	6	0.02	0.0365	-0.01259
0.13941	0.1368	0.0026	7	0.15	0.1368	0.00851
-0.13296	-0.1305	-0.00251	8	-0.1	-0.1305	-0.0019
0.06947	0.0672	0.00231	9	0.07	0.0672	0.00122

Table-6c: Treynor's Ratio							
3 Month Holding Period (20 Stocks)				3 Month Holding Period (15 Stocks)			
	T PORTFOLIO	T MARKET	DIFF		T PORTFOLIO	T MARKET	DIFF
1	0.07087	0.0506	0.02023	1	0.06	0.0506	0.00531
2	0.15594	0.1528	0.00318	2	0.15	0.1528	-0.00726
3	0.07646	0.0552	0.02128	3	0.07	0.0552	0.01104
4	0.14355	0.1765	-0.03291	4	0.13	0.1765	-0.04946
5	-0.0923	-0.1227	0.0304	5	-0.1	-0.1227	0.02076
6	0.10172	0.1155	-0.01377	6	0.09	0.1155	-0.02211

Table-7			
DIVERSIFICATION ASPECT			
Industry	NIFTY	20-stock	15-stock
Computers – Software	18.10%	25.51%	26.13%
Refineries	10.30%	13.39%	15.03%
Telecommunication - Services	10.20%		
Banks	9.50%	11.19%	10.00%
Oil Exploration	9.40%	14.69%	16.50%
Electrical Equipment	7.00%	4.72%	5.22%
Automobile - 4 wheelers	4.40%	5.01%	3.27%
Pharmaceuticals	4.30%		
Cigarettes	4.00%	6.10%	6.85%
Steel & Steel Products	3.60%	4.96%	2.90%
Cement & Cement Products	3.20%	1.76%	
Diversified	3.20%	4.51%	5.06%
Automobiles - 2 and 3 wheelers	2.60%	2.41%	2.67%
Finance – Housing	2.20%	2.83%	3.19%
Engineering	2.00%	2.91%	3.17%
Aluminum	1.90%		
Gas	1.30%		
Power	1.20%		
Media & Entertainment	0.70%		
Personal Care	0.40%		
Petrochemicals	0.40%		
Travel and Transport	0.30%		
Grand Total	100.00%	100.00%	100.00%

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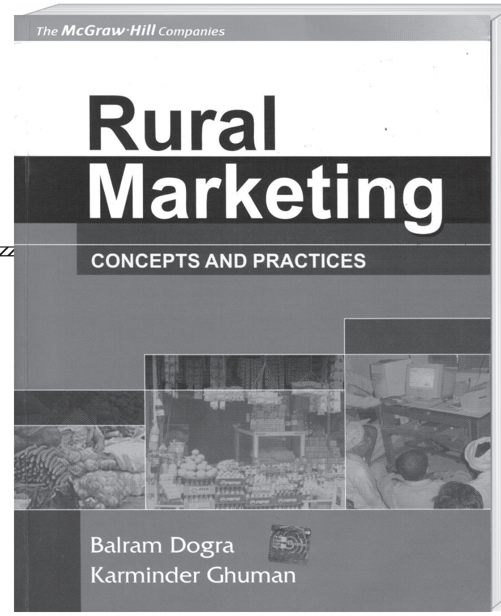
Skimming and Scanning



Book Title : *Rural Marketing Concepts and Practices*
Author : **Balram Dogra and Karminder Ghuman**
Edition : **2008**
ISBN : **978-0-07-066000-7**
Pages : **351**
Publisher : **Tata McGraw-Hill Publishing Co.Ltd., New Delhi.**

Rural Marketing authored by Balram Dogra and Karminder Ghumanm is one of the text books which has been written in simple language and style after an in depth research in the rural market. Although basic principles and the theories of the management of marketing remain the same in urban or rural marketing scenario,the marketing companies go about the research in a rural market, understand what a rural market is like, and then strategize depending upon the users and their location.

An organization will excel others in rural markets by constantly improving competence of the concerned personnel. This is where this book on Rural Marketing would be important as tool for the business management students to be effective managers in future with need based and goal achieving strategies in rural marketing.

One of the unique features of this text book is the pellucid writing of the articles with highly structured format. At the end of each chapter there is a conclusion which has been derived after rigorous research in the market potential and marketing in the rural sector. Further the whole chapter is summarized. These points need attention at the end of each topic. There are questions which are conceptual, objective and application in nature, where a management student can evaluate their comprehension level by just doing these simple exercises.

In the beginning, the authors have explained what the rural is and give importance to the villages, the custodians of our culture and spirit of our nation. For centuries, rural India was considered to be static and self-sufficient, but today the corporate sectors have brought about changes in the perception about rural India. They have started exploring and understanding the dynamic rural markets, where they see opportunities though they have to tread along a path laid with thorns. Authors are very clear about the facts that marketing in Rural India has to be done meticulously with a clear long term strategy, with high investment and energy level that was used to build a brand in urban market.

During the course of their research in rural Punjab they found that there was shortage of focused literatures to guide potential managers so as to come up with apt strategies for rural markets.

Their research has enabled them to express different evolutionary phases in a highly structured manner. The text enables the readers to understand the life style of rural consumer since the authors made a study of their profile along with their income while selecting or rejecting the segment as target market. Further the research shows that rural literacy rate has jumped from 36 percent to 59 percent, rural Indians are not as poor as perceived earlier because they contribute more than half of the national income. Rural economy is less dependent on agriculture since their share of non-farm has increased.

This book also discusses the various parameters for segmenting the rural market for the professionals to adopt for tapping the rural market. Here the authors have cited examples of how some organizations have done reverse engineering of their products to suit rural markets. This is achieved by understanding the region-specific requirements both in terms of product availability and communication methodology.

This book speaks of the initiatives of the Institute of rural marketing, Anand (IRMA) for starting a course on rural marketing in the 80's, where in different aspects of rural marketing was conceptualized, issues and the market potential analysis was published internationally by IRMA.

Authors in their text have added two more P's (Passion And Pace) in addition to the existing 4P's, further suggesting a marketing mix in an organizations point of view, a 4 A's model: Affordability, Availability, Awareness, and Acceptance, have been developed for an organization in order to be successful in targeting rural market.

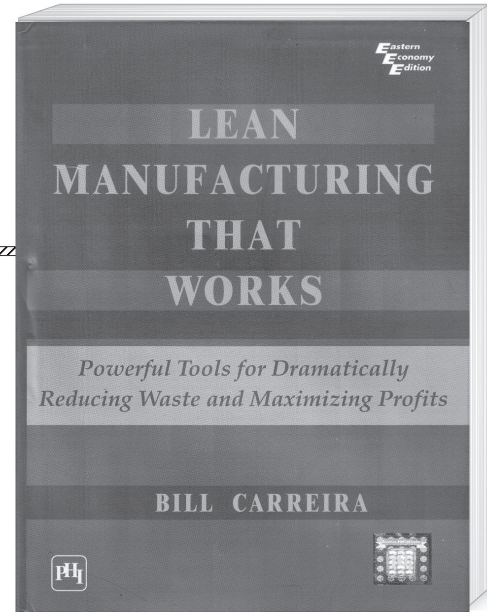
Authors have given their views on all aspects of rural marketing from different angles, probably few comments and suggestions from a small sample size of rural population (consumer) would have thrown some more light on this concept, also few colour snap shots in context to the rural tradition and the shops of rural India could have been incorporated.

As a whole the authors have explored and have been successful in generating interest and value to the reader by striking a balance between the concepts of fundamental marketing and their applications. The book will definitely equip the reader (a potential manager) with necessary tools and skills to understand rural marketing for them to comprehend and strategize in a practical manner.

This book definitely will be a useful text for the management students and for the academicians handling marketing course.

George Joseph
Manager-Corporate Relations
SCMS-COCHIN
Prathap Nagar, Muttom, Aluva-683 106
Cochin
Email: georgejoseph@scmsgroup.org

Skimming and Scanning



Book Title	:	***Lean Manufacturing That Works***
Author	:	**Bill Carreira**
Edition	:	**2007**
Price	:	**Rs.350/-**
ISBN	:	**978-81-203-3127-3**
Pages	:	**295**
Publisher	:	**Prentice- Hall of India Pvt. Ltd., New Delhi.**

Readers of books that are highly focused on a single specific theme, especially in the field of management, would have observed that while some of them emphasise the conceptual aspects of the subject, some others concentrate on the implementation. Rarely does one come across a book which does equal justice to both theory and practice. "*Lean Manufacturing That Works*" by Bill Carreira is on one such exception. The book virtually covers every factor that is relevant to the topic. The Why, the What and the *How* of Lean Manufacturing have been adequately dealt with. Whereas the book is divided into two main parts, on the "WHAT" and the "HOW," the introduction and conclusion deal with the "WHY" factor.

Lean Manufacturing is one of the tools that enables an organization to attain the status of World Class Manufacturing. To be *lean* means getting rid of all the *fat.* In the context of an organization, *fat* means *waste.* Remove all the fat, and there you are! YOU ARE LEAN!!

The very concept of Lean Manufacturing is based on the elimination of *waste.* When one systematically analyses the processes that are carried out by any organization, one will come across both *value-adding* and *non-value-adding* functions.

Lean Manufacturing centers around the identification and elimination of wasteful activities that consume time, energy, material, money and space without adding any *value* whatsoever. Once an organization is able to do that, it will be able to reach optimal levels of efficiency, productivity and profitability.

The book under review enables the reader to understand how to:

- Design and establish lean manufacturing systems in an organization
- Control *cost, cash flow, velocity* and *lead time* thereby eliminating waste
- Gain competitive advantage through elimination of waste.

The first part of the book deals with the significance of customer satisfaction in achieving profit maximization. Factors such as *cost, cash flow, inventory carrying cost. Throughput, Lead Time, Batch Queue, Flow & Velocity, Waste* and *Value Addition* are covered systematically in this section.

Part two is all about the implementation of Lean Manufacturing Strategy. A day-to-day action plan is given here, covering basic aspects such as:

- Value stream mapping,
- categorizing tasks in terms of Value-Adding and Non-Value-Adding,
- Defining,
- Quantifying and Tracking of each task,
- Root Cause Analysis,
- Layout,
- Lead Time,
- Pull Vs Push,
- Kanban,
- Engineering Analysis,
- Flow Chart,
- TAKT,
- 5S,
- Set-up Reduction,
- TPM.

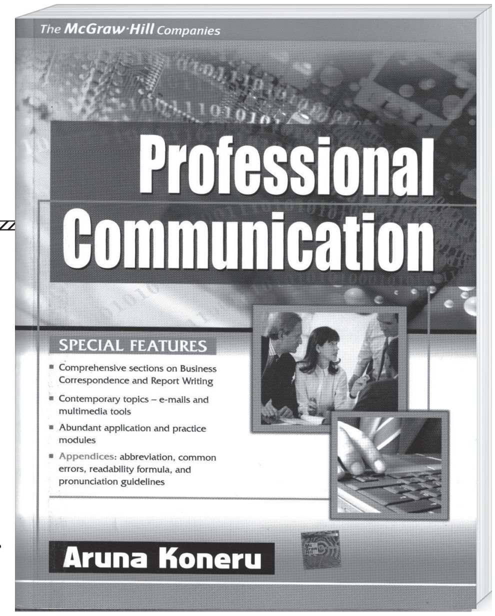
Starting with the Introduction covering the fundamental principles of Lean Manufacturing, the book concludes with the chapter on the *Psychology of Lean.*

It is remarkable that the author has been able to do full justice to the WHY, WHAT and WHEN aspects in sufficient detail, in just under 300 pages! The presentation, mostly in the form of dialogues based on real life cases, is rather unique, and that makes the book all the more readable. Quite a number of diagrams charts, tables and photographs have been made use of to illustrate the various concepts. The language employed is quite simple, with hardly any use of typical jargons. This makes it quite easy for even a layman to comprehend and digest the subject matter. The printing is of exceptional quality and clarity. The book gives value for money and is really worth perusal, for practitioners, academicians and students of production engineering as well as operations management.

The author, Bill Carreira, is a consultant, trainer mentor and facilitator of Lean Manufacturing methodologies. He has over thirty years of experience in manufacturing, engineering and P & L management, and has worked with both fortune 500 companies and SME's across a broad range of industries.

Prof.K.J.Paulose
Dean-Management Studies
SCMS-COCHIN
Prathap Nagar, Muttom, Aluva-683 106, Cochin
Email: Paulose@scmsgroup.org

Skimming and Scanning



Book Title	:	***Professional Communication***
Author	:	**Aruna Koneru**
Edition	:	**2008**
ISBN	:	**978-0-07-066002-1**
Pages	:	**500**
Publisher	:	**Tata McGraw-Hills Publishing Co. Ltd., New Delhi.**

What is the art of articulation? Are we confusing articulation with talking for effect? How different is articulation from communication?

Here is a book - *Professional Communication* - which could probably shed light on these queries and tell us how best to articulate to make ourselves listened to.

Reams have been written on the art of communication.

We certainly have come a long, long way from the age of the cave man who drew pictures and symbols on cave walls to communicate his thoughts. And communication has evolved from war cries and rhythmic chants to the stylistic version of sounds that we now term as language.

Communication is the in-thing today. And the more effective it is, the more your success quotient. In a seamless globalised world, how we talk matters more than what we talk.

But the art of talking does not come as a birthright. It's a deliberate process of being tutored to deliver your words to perfection which makes people sit up and listen to you.

Of the plethora of books that have hit the "Effective Communication" or "Business Communication" market, Dr.Aruna Koneru's book *Professional Communication*, fits the genre to a T.

Structured and well laid, it's a professional's guide to self-improvement. Not that anyone can master the art of good writing and speaking by reading a book.

But as the author herself puts it: "The strong belief is that the mastery of knowledge and concepts, consistent effort, purposeful and meaningful practice and continuous application will develop the necessary skill."

Dr.Koneru has propounded a five-step programme to achieve the objective of effective communication. The book explains or discusses the concept, presents information, helps to establish a plan of action by using the concepts and finally, helps the reader integrate what has been learned into everyday communicative activity at the workplace.

Right from the basics of communication the author takes us through a journey in business communication. Thus we get to learn all about the nuances of letter writing, right from planning a letter, to the process of writing.

From here we go to the more mundane matters of framing memos, writing minutes and preparing brochures.

The book then proceeds to the nitty gritties of writing and reading skills and winds up with the mechanics of writing.

Unlike many books of the genre by other Indian authors, Aruna Koneru's observations make interesting reading. For example, she tells us that to pause while giving a talk is not a sign of indecision or weakness. In fact, it is the speaker's greatest "potential weapon." It can signal the beginning or the end of a thought unit and lend dramatic impact to a statement, says Dr.Koneru.

The book is full of insights into how best one can turn one's diffidence in communication to expressive boldness. *Professional Communication* assumes significance when viewed against the demands of corporate excellence.

Dr.Aruna Koneru who works with Icfai Institute of Science and Technology, has put into her work extensive research as well as a fund of experience gained during her 12-year stint at BITS Pilani, Rajasthan.

The book should surely be effective reading material for all who want to tone up their communicative skills.

Prof.Rebecca Thomas
Faculty-Business Communication
SCMS-COCHIN, Prathap Nagar
Muttom, Aluva-683 106, Cochin
Email: Rebecca@scmsgroup.org

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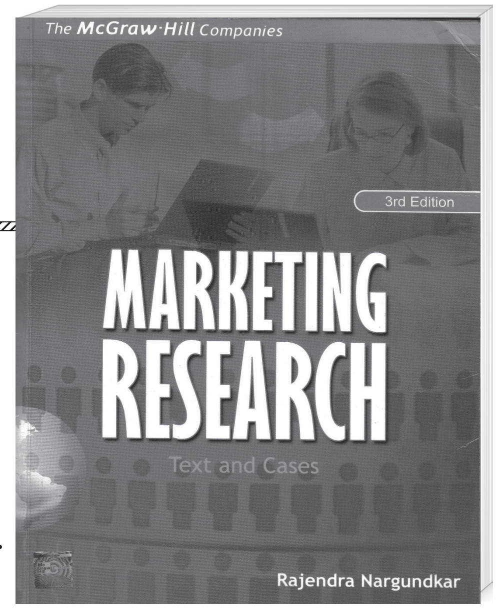

Book Title : ***Marketing Research*** ***Text and Cases***
Author : **Rajendra Nargundkar**
Edition : **3rd [2008]**
ISBN : **978-0-07-022087-1**
Pages : **531**
Publisher : **Tata McGraw-Hills Publishing Co. Ltd., New Delhi.**

Business evolved as an organized activity since the last ten decades, so also business management as a field of academics. Though management activity had existed since the evolution of mankind, business management has got the attention as a scientific and systematic study since 1900. This scientific and systematic approach to management studies provided a new dimension to business as a discipline and a practice. Since that period, the management activity became multidimensional, started growing, developing, dividing and diversifying into specializations, super specializations and sub-specializations. This emergence of the specialization in Management discipline was primarily focused on four basic areas namely Marketing, Finance, Human Resources and Systems. Further, various specialization areas were added to Management Discipline making it grow wide and large. Over a period of time, Marketing emerged as the primary and one basic specialization in the area of Management. Now Marketing as a specialization has diversified into sub-specializations like sales promotion, branding, advertising, consumer buying behaviour, pricing policies, pricing strategies, marketing research etc. The new specialization areas emerged into a separate segment of its own with the advent of new markets, new products and new customers. As a result, competition increased and an in-depth study on acceptance of products in specified markets became very essential and it paved the way for the development of an advanced area in Management namely Marketing Research.

The book – Marketing Research – Text and Cases by Prof. Rajendra Nargundhkar provides a deep knowledge and understanding to the readers the need and importance of Marketing, Research, and Marketing Research in promoting product, service and idea in new as well as existing markets. The references are effectively supported with the help of text and cases of relevance. Dr.Nargundhkar has approached the subject in a very scientific and systematic manner and at the same time explained the dimensions in a very simple and elegant manner. The scientific approach towards the subject makes the publication attractive not just to a management student but to one and all engaged in business and industrial research.

Dr.Nargundhkar, by incorporating the latest trends in Marketing Research namely online research practices and its dimensions has given thought to the current trends in marketing research while preparing the subject. The selection of text, cases, examples, explanations and assignments at the end of various discussions explains the significance provided by the author to present the subject in its completeness.

The book is organized in three sections. Part 1 examines the fundamentals of marketing and research process. The basic understanding of the subject is explained through the first seven chapters. Part 2 has eleven chapters. Chapter 8 to 14 tries to explain the importance of research methodology, types and process of research and the approaches to research. Chapter 15 to 18 explains the importance of research in diversified business industries with clear explanations. Part 3 of the text is very important for a research person as it provides clear idea on the best practices in marketing research and the career opportunities for a research person in business. Dr.Nargundhkar has arranged the topic to help the reader in identifying and understanding the success or failure of products, services and ideas in marketing terms and helps to develop research inquisitiveness to interested persons.

Chapterisation:-

Chapters 1 to 7 explain the fundamentals of marketing and research. These chapters provide information on requirement of research in marketing, methods for conducting research, questionnaire preparation, data collection, sampling plan and procedure etc.

Chapters 8 to 14 provide an insight into data analysis and interpretation methods, compilation of research findings and its presentation. The systematic approach towards standardization, coding, tabulation, usage of research designs, analytical tools and techniques are clearly explained in these chapters.

Chapters 15 to 18 explain the utilization of research findings as part of marketing research for a systematic approach and scientific development and placement of product / service / idea into market. The chapters clearly present the tools and techniques and methodology for marketing research with up-to-date live examples, cases and references providing clarity to the study.

The book is of real value and usage for both academicians and industrialists for their specific usage.

About the author:-

Dr.Rajendra Nagundhkar, a postgraduate in Marketing from IIM Bangalore and PhD from Clemson University, USA, spend nearly two decades of his career in Industry and academia to emerge as one of the most searched-for personalities in Marketing Research. Dr.Nargundkar had his association as a marketing consultant and faculty at Clemson and Lander Universities in US, Kirloskar Institute of Advanced Management Studies, Xavier Institute of Management and PES Institute of Management in India. Dr.Nargundhkar was associated with IIM Kozhikode and IIM Lucknow as faculty in Marketing before taking up the present assignment as Dean, IFIM Business School, Bangalore. Dr.Nargundhkar has more than fifty publications in national and international journals to his credit. *Services Marketing* a book published by Dr.Nagundhkar is a popular text in leading B.Schools.

Dr.Mahesh R.Pillai
Faculty-Human Resources
SCMS-COCHIN
Prathap Nagar, Muttom,
Aluva-683 106
Email: Mahesh@scmsgroup.org

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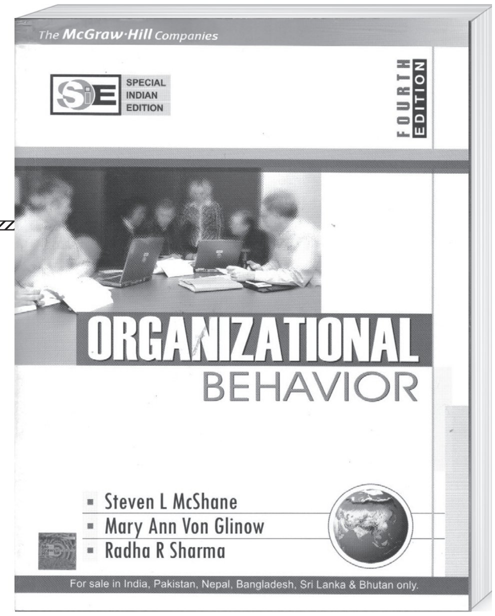

Book Title : *Organizational Behavior*

Author : **Steven L.McShane, Mary Ann Von Glinow and Radha R.Sharma**

Edition : **4th [2008]**

ISBN : **978-0-07-007804-8**

Pages : **665**

Publisher : **Tata McGraw-Hills Publishing Co. Ltd., New Delhi.**

Practising managers have long understood the importance of interpersonal skills to managerial effectiveness; business schools have been slower to get the message. Until the late 1980s business school curricula emphasized the technical aspects of management, specifically focusing on economics, accounting, finance and quantitative techniques. Over the decades, however, business faculty have come to realize the importance that an understanding of human behaviour plays in determining a manager's effectiveness, and required courses on people skills have been added to many curricula.

The pace of technical and organizational change in India is so rapid - a fall out of the economic reforms of the nineties - that most young managers will want to make the hay while the sun shines, by making as many job changes as are optimal and adequate to obtain enough experience in varied and diverse work cultures, environments and ethos. We have come to understand that technical skills are necessary, but they are not enough to succeed in management.

In today's increasingly competitive and demanding workplace, managers can't succeed on their technical skills alone. They also have to have good human skills. This book has been written to help both managers and potential managers develop those human skills.

It is a new era of organizational behaviour! Virtual teams are replacing committees; values and self leadership are replacing command and control supervision. Knowledge is replacing infrastructure. Companies are looking for employees with emotional intelligence, not just technical smarts. Globalization has become the mantra of corporate survival. Co-workers aren't down the hall; they're at the other end of an internet connection located somewhere else on the planet.

Organizational Behavior 4th edition incorporates emerging workplace realities. It explains how emotions guide employee motivation, attitudes and decisions; how values have become the new resource to shape workplace behaviour; how companies rely on creativity and a learning orientation as their source of competitive advantage in the knowledge economy; and how appreciative enquiry has become one of the emerging strategies for organizational change. It updates our knowledge about individual behaviour, values, personality, perception and learning in organizations, workplace emotions and attitudes, motivation in the workplace, applied performance practices, work related stress and stress management, decision making and creativity, team dynamics, communicating in teams and organizations, power and influence in the workplace, conflict and Negotiation in the workplace, leadership in organizational settings, organizational structure, culture and change.

Another distinctive feature of *Organizational Behavior,* Fourth Edition is that it is written for everyone in organizations, not just "managers." It is relevant and useful to anyone who works in and around organization. It justifies four aspects:

a) Linking theory with reality
b) Global orientation
c) Active learning and critical thinking support
d) Contemporary theory foundation

The new reality is that people through out the organization-systems analysts, production employees, accounting professionals are assuming more responsibilities as companies remove layers of bureaucracy and give non-management staff more autonomy over their work. The philosophy of this book is that everyone who works in and around organizations needs to understand and make use of organizational behaviour knowledge.

Authors have updated the theory and practical knowledge throughout this fourth edition of *Organizational Behavior.* Here real life stories appear in many forms. These stories provide representation around the globe. They also cover a wide range of industries from software to government services and from small businesses to fortune 500 companies. *Organizational Behavior,* fourth Edition, includes more than two dozen case studies, many written by instructors from the United States, Mexico, Canada, Malaysia, and Australia. Case studies connect organization behaviour concepts to the emerging work place realities.

It offers three-dozen self assessments, including scales that measure emerging concepts such as Guanxi orientation and resilience.

The text is divided into 17 chapters which include details about work life balance and reorganizes the OB trends to include virtual work as theme. It contains many current topics in the Indian context, such as Evolution of Organization Behaviour in India, Globalization and its impact on India. In the Indian context, it includes a discussion on attrition and employee retention strategies, as well as Indian values and workplace behaviour. It describes the important marketing concept about how people "listen in" on their emotions when forming attitudes.

This book conveys a strong global orientation and goes beyond the traditional practice of describing how US companies operate in other parts of the world. Instead it takes a truly international approach by continually illustrating how OB concepts and practices are relevant to the companies in every part of the world.

As the world is getting smaller, the international influences on organizational behaviour become more pertinent. The book is a team effort. Sincere appreciation goes to all the three authors.

Steven L. McShane, is professor of management in the Graduate School of Management at the University of Western Australia.

Dr.Mary Ann Von Glinow is director of Centre for International Business Education and Research (CIBER) and is research professor of management and international business at Florida International University.

Dr. Radha R. Sharma is professor and chair, OB and Human Resource Development at Management Development Institute, Gurgaon, India.

Dr.Vidyeswari V.
Lecturer - Human Resource Management
SCMS-COCHIN, Prathap Nagar,
Muttom, Aluva-683106, Cochin
Email:vidyeswari@scmsgroup.org

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Phone: 91-484-262 3803 / 262 3804 / 262 3885 / 262 3887 Fax: 91-484-262 3855
Website: www.scmsgroup.org E-mail: editor@scmsgroup.org / scmseditorcochin@yahoo.com

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Aims and Scope

The *SCMS Journal of Indian Management* is a peer-reviewed Journal. The Journal deems it its mission to submit to the readers fresh fruit of management thoughts and rich cream of current innovative research. The format of the Journal is designed reader-friendly. The academia and the corporates have an easy access to the Journal.

The Journal looks for articles conceptually sound, at once methodologically rigorous. The Journal loves to deal knowledge in management theory and practice individually and in unison. We wish our effort would bear fruit. We hope the Journal will have a long life in the shelves catering to the needs of b-students and b-faculty.

§ Proposals for articles that demonstrate clear and bold thinking, fresh and useful ideas, accessible and jargon-free expression, and unambiguous authority are invited. The following may be noted while articles are prepared.

§ What is the central message of the article you propose to write? Moreover, what is new, useful, counterintuitive, or important about your idea?

§ What are the real-world implications of the proposed article? Can the central message be applied in businesses today, and if so, how?

§ Who is the audience for your article? Why should a busy manager stop and read it?

§ What kind of research have you conducted to support the argument or logic in your article?

§ What academic, professional, or personal experience will you draw on to make the argument convincing? In other words, what is the source of your authority?

§ The manuscript of reasonable length shall be sent to the Editor—*SCMS Journal of India Management* (Both for postal and electronic submission details are given here under).

The manuscript should accompany the following separately:

§ An abstract (about 100 words), a brief biographical sketch of above 100 words for authors describing designation, affiliation, specialization, number of books and articles published in the referee journals, membership on editorial boards and companies etc.

§ The declaration to the effect that the work is original and it has not been published earlier shall be sent.

§ Tables, charts and graphs should be typed in separate sheets. They should be numbered as Table 1, Graph 1 etc.

§ References used should be listed at the end of the text.

§ Editors reserve the right to modify and improve the manuscripts to meet the Journal's standards of presentation and style.

§ Editors have full right to accept or reject an article for publication. Editorial decisions will be communicated with in a period of four weeks of the receipt of the manuscripts.

§ All footnotes will be appended at the end of the article as a separate page. The typo script should use smaller size fonts.

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