

CONVERGENCE OF GDP PER CAPITA IN ASEAN COUNTRIES

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Economists have long debated whether different countries and regions within countries are converging over time in terms of per capita income. In the last decade the convergence debate captured the attention of macroeconomic theories and econometricians. The increasing diversity of average growth rates and income levels across countries has generated a large literature on testing the income convergence hypothesis. Most countries in South-East Asia, have experienced substantial economic growth, with the pace of growth having varied substantially across countries. In this paper, test of convergence was applied to determine if there is a convergence club for ASEAN-9 countries and whether, the catching up hypothesis which stated that the lagging country, with low initial income and productivity levels, will tend to grow more rapidly by copying the technology of the leader country, without having to bear the associated costs of research and development. The finding of $\hat{\alpha}$ and $\hat{\sigma}$ convergence in the study suggests that ASEAN countries are converging towards common GDP per capita steadily but slowly. However, while convergence has occurred, the speed at which the initially poor countries are catching up with the initially rich countries is slow.

INTRODUCTION

In the current global era there has been a growing importance of the economic integration approach and relationships among blocks of countries. This has resulted from aggressive globalization (emerging from the giant economies), increasing similarities of tastes and attitudes, deregulation and eliminating of physical, fiscal/financial and technical barriers, speedy scientific and technical innovations, and predictive uncertainty. The main reason behind this is that most of the countries cannot always have the resources or knowledge to cope with increasingly complex global environments from internal resources alone. Thus, the traditional thinking about the special intensity of competition and marketing activities as well as the old nature and boundaries of countries and organizations become less and less useful in organizing economic activities. In effect, an economic alliance or network based cooperation, collaboration, cost reduction, interest sharing, adaptation, flexibility, cost reduction, shared objectives, closeness, openness, and a commitment between different countries (collaborators) on an integrating ongoing basis-, has emerged as a more effective approach to meet

the new global environmental challenges and opportunities. The nature of these economic integration relationships usually results in achieving synergy effects.

The Association of Southeast Asian Nations, or ASEAN, was established on August 8, 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the Founding Fathers of ASEAN, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. Further it was joined by Lao PDR, Myanmar, Cambodia and Brunei-Daruslam and Philippines. Thus, it becomes imperative to know whether the fruits of economic integration have been reaped equally by low-income and high-income economies. Today, ASEAN has developed an organisational structure that looks not only into the political and economic issues in the region but also social developmental issues. The increasing diversity of average growth rates and income levels across countries has generated a large literature on testing the income convergence hypothesis.

Most countries in South-East Asia, have experienced substantial economic growth, with the pace of growth having varied substantially

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across countries. In the last three decades, there has been a rapid rise in the economies of East Asian and South East Asian nations. The twenty three economies of east Asia grew at a faster average rate than all other regions in the world over the 1965-90 period as reported by World Bank (1993). The high performing Asian economies (HPAE) such as Japan, the four Asian Tigers (Hong Kong, South Korea, Singapore and Taiwan), and the three South-East Asian newly industrializing economies (Indonesia, Malaysia and Thailand), has grown at a rate more than twice as fast as the rest of East Asia since 1960. After the phenomenal growth of the Japanese economy, the growth pattern in HPAE followed a flying geese pattern respectively by Hong Kong, South Korea, and Taiwan and more recently by several countries from South East Asia.

The formation of ASEAN can be attributed to geographical proximity and regional economic and political co-operation among its member countries. In the past 30 years, the ASEAN-5 countries that differ considerably in size, level of economic development and resource endowment have undergone profound transformations. Each country has experienced substantial industrial diversification and economic growth due to the adoption of export-oriented trade policies, the rapid flow of foreign direct investment, and sound macroeconomic policies. Selected indicators for the ASEAN countries are shown in (Table 1). Amongst the ASEAN-5 countries, Singapore is the smallest in terms of area and population, but has the highest GDP per capita, with no foreign debt, whereas, Indonesia is the largest, but also has the lowest GDP per capita and the highest external debt. The sources of rapid and sustained growth, and the shared characteristics among the ASEAN-5 countries over the past three decades, were higher levels of foreign direct investment, physical and human capital accumulation, and export growth, as well as macroeconomic stability (see Lim, 1999).

Economists have long debated whether different countries and regions within countries are converging over time in terms of per capita income. The independent interest in convergence whether poor economies who are in embryonic stage tends to catch up with richer

ones is a basic question and of considerable interest for economic integration. It addresses the concern of policy makers and brings to analysis ideas and insights into the economics of income distribution and redistributive policy. In the last decade the convergence debate captured the attention of macroeconomic theories and econometricians. Recent empirical studies have found evidence of several convergence clubs, in which per capita incomes have converged for selected groupings of countries and regions. In this paper, test of convergence was applied to determine if there is a convergence club for ASEAN-9 countries and whether the catching up hypothesis which stated that the lagging country, with low initial income and productivity levels, will tend to grow more rapidly by copying the technology of the leader country, without having to bear the associated costs of research and development. The paper also aims to describe the concept of $\hat{\alpha}$ -convergence.

REVIEW OF LITERATURE

The testing of real income convergence, i.e., convergence in per capita output across different economies is most challenging in the recent international economic literature (Islam, 2003). There are three main reasons because of which the study of this subject becomes interesting. Firstly, this exercise can help us to discriminate between various economic growth models available. The neoclassical model predicts that per capita output will converge to each country's steady-state or to a common steady-state, regardless of its initial per capita output level (Solow, 1956). Countries with low initial per capita income have low-ratios of capital to labour hence a higher marginal product of capital. International capital would flow to areas with relatively high rate of return which is to areas where capital is relatively scarce. Therefore, capita labour ratios will move over time to equality and with them factor prices. This is the classical prescription of the neoclassical growth model with decreasing returns. This would imply that capital would flow from rich to poor countries and income in poor countries would grow faster than incomes in rich countries and that too would eventually converge. But endogenous growth models, by underlining the

importance of initial conditions and the possibility of multiple equilibriums, show that there is no tendency for income levels to converge in the long-run (Romer, 1986, 1990). Lee et al. (1995) found no evidence of convergence on examining 102 non-oil producing countries over the period 1960-89 and stated that it seems unlikely that there is a common equilibrium across all countries. Baumol et al. (1989) argued that if one looks separately at low income, middle income and high income countries there is a evidence of convergence within each group. However, thirdly on the empirical side, strong differences have been observed in per capita output and in growth rates across countries during the last three decades, and especially between many African economies and emerging Asian and developed economies (Maddison, 2003).

There are at least three different types of convergence tests which exist in the growth literature. The most common test of convergence is to regress the average growth rate on the initial level of real per capita output using cross section data (see Barro, 1991). The concept of *b*-convergence, given by Barro, implies that poor countries grow faster than rich countries. Typically, the existence of convergence is tested by running so-called Barro (1991) regressions which involve regressing the growth in *per capita* GDP on its initial level for a given cross-section of countries (or regions within countries). Convergence in the unconditional sense is implied, according to this methodology, if the coefficient on initial *per capita* GDP is negative and statistically significant. A negative estimate of $\hat{\alpha}$ is said to indicate 'absolute $\hat{\alpha}$ convergence' across countries. If other characteristics of economies such as the investment ratio, educational attainment and other policy variables are included in the growth regression, a negative estimate of $\hat{\alpha}$ is said to indicate 'conditional $\hat{\alpha}$ convergence'. However, this methodology has been criticised by Friedman (1992) and Quah (1993) who point out that these regressions are liable to produce biased estimates of *b*-convergence. Friedman (1992) suggests that the simple trend in the *coefficient of variation* of *per capita* GDP provides an unbiased estimate of *b*-convergence. Quah (1993) suggests a methodological approach that is capable of

capturing the full dynamics of evolving cross-country distributions of *per capita* GDP. A second measure of convergence is to determine if the dispersion of real per capita income is falling over time, namely 'ó convergence' (see Barro and Sala-i-Martin, 1992). However, the convergence can also be checked in a time series framework. Thus the third definition of convergence is to determine whether there exists a common deterministic and/or stochastic trend for different countries (see Bernard and Durlauf, 1995). In this case, convergence for a group of countries means each country has an identical long-run trend.

The wave of regionalism which widely spread in the 1990s has spurred academic and professional interest towards the economic effects of Regional Integration Agreements (RIAs). The most prominent effect of RIA is to strengthen trade links and hence to facilitate technological spillovers across borders. Then, as a result income levels should converge and the initially poorer member states would catch up with the richer ones. However, in a recent theoretical article, Venables (2003) stated that income dispersion across countries in a RIA will decrease only in the case of North-North integration (or at most North-South). On the contrary, South-South integration could easily lead to income divergence and unequal distribution of welfare gains.

Bernard and Durlauf (1995, 1996) proposed to consider convergence as a stochastic process, using the properties of time series, and test the convergence hypothesis from unit root tests. However, time-series unit root testing had been often criticized for its limited power and poor size properties (Haldrup and Jansson, 2006). The small number of observations available on the time-series dimension would then make the country-by-country analysis of income convergence in RIAs of recent formation particularly problematic. Therefore, Evans (1996) suggests exploiting both the time-series and the cross-section information included in the data of the per capita income in order to evaluate the convergence hypothesis. With this approach, the crosssectional and time-series information are combined, thus inducing a significant improvement in terms of power of the test.

A lot of empirical work has been done on the various regional economic groupings which checked the convergence of GDP across different regions of the world. Many of the results obtained in the literature strongly depend on the set of regions considered, the sample period, and the estimation method used. Moreover, most of the works are based on either cross-sectional or fixed effects estimates. In general, studies based on fixed effect models, produce much higher convergence rates than those obtained using cross-country regressions. Both cross-sectional and fixed effect models, however, are obtained by imposing strong prior restrictions on the model parameters. The first imposes absolute regional homogeneity in the parameters of the process describing GDP growth. The second allows for heterogeneity, but this depends only on the intercept term as if all the differences in the GDP growth rates were determined by the starting point for each region. An alternative approach has been proposed by Peracchi and Meliciani (2003) that postulated a panel-data model in which all parameters can differ across regions. In this way not only the model avoids the imposition of strong restrictions, but it also provides spatially distributed coefficient whose pattern can add significant insights. They found significant correlation of growth rates across neighboring regions and between regions belonging to the same country. Furthermore, a series of papers (Arbia et al., 2002; Arbia et al., 2003; Baumont et al., 2002) amongst the other, have shown that the presence of spatial effects matter in the estimation of the convergence process both in terms of different spatial regimes and in terms of significant spatial spill-overs. Spatial effects, but incorporated within a continuous time framework, were also discussed by Arbia and Paelinck (2003 and 2004).

According to Ben-David and Rahman (1996), countries that trade extensively tend to converge more than countries that have less mutual trade. They examine two possible explanations. First, that trade-related income convergence is because of convergence in capital-labour ratios. And second, that there is a trade-related convergence in technologies. They argue that the latter explanation is supported by high convergence in total factor productivity between countries

that have extensive trade relations. Ben-David and Kimhi (2000) provide evidence that especially increased exports from poorer countries to wealthier ones are related with an increase in the speed of income convergence between them. They also argue that after liberalisation, there is a significant increase in trade, which tends to level off and then remain at its new higher level at the end of liberalisation. According to Ben-David (1993), the liberalisation of trade among the six original EEC countries led to income convergence. Further, the timing of trade reform among the EEC and the EFTA countries was found to coincide closely with convergence. Ben-David (1996) provides an analysis of several trade regimes and similar results of the positive effect of trade liberalisation.

Mankiw et al., (1992) argue that in the textbook Solow growth model, convergence takes place at a rate of 4 percent, which would imply that the economy moves halfway to its steady state in 17 years. On the other hand, if the textbook model is augmented by human capital, the convergence rate declines to 2 percent and the economy moves to its steady state in 35 years. Higher education makes it easier to adopt new technology. For example, Mankiw et al., (1992) and Bassanini and Scarpetta (2001) find evidence of the positive effects of schooling for growth. Wagner and Hlouskova (2002) base their analysis on the historical convergence of the EU countries and then project it on the accession countries. They estimate the time it takes for the accession countries to catch up with the EU15 countries. With the exception of the wealthier Slovenia and the Czech Republic, they estimate it to be three or four decades.

A lot of studies have been done on the convergence of GDP per capita in European countries but little work seems to exist in the case of ASEAN countries. However, Lim and McALEery (2004) have done a study on five founding members of ASEAN. The study revealed a negative correlation between the average growth in income and its initial level for ASEAN-5 and ASEAN-5/ USA countries, but the estimates were insignificant. Similarly, for the cross-country income deviations for ASEAN-5 and ASEAN-4, there were no reductions in income dispersion. Thus, in this paper an

attempt is made to study the convergence of GDP per capita in the case of all the ten member countries of ASEAN.

OBJECTIVE OF THE STUDY

The objective of the study is to examine the convergence of GDP per capita in the ASEAN countries for the period of 1990-2008.

RESEARCH METHODOLOGY

The Data: The data of the study consists of annual per capita GDP data from World Bank Data Base for nine ASEAN economies in PPP US dollars, and spans from 1990 to 2008. The countries which form the ASEAN are Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunie-Darussalem, Vietnam, Lao PDR, Myanmar, Cambodia. Since per capita GDP in PPP US \$ for Myanmar was not available, it has been omitted from the analysis.

The Model: The study is based on the accepted version of the neoclassical growth model. The model imply that if the rates of time preference and production functions are the same across regions or countries then per capita income in due course converge to a common equilibrium value. Beta and Sigma-Convergence are two different measures to measure similarity in the income, identified by Barro and Sala-i-Martin (1991, 1992). Beta convergence occurs when GDP per capita in low income countries grows faster than that of the high per capita income countries. It is hypothesized that there exists a convergence in the GDP per capita.

Beta-convergence is estimated using the regression:

$$\left(\frac{1}{T}\right) \log \left(\frac{y_{i,t_0+T}}{y_{i,t_0}} \right) = \alpha - \left(\frac{1 - e^{-\hat{a}T}}{T} \right) \log(y_{i,t_0}) + \varepsilon_{i,t_0,t_0+T}$$

y_{i,t_0} = GDP per capita in PPP (US \$) in country i in year t_0

y_{i,t_0+T} = GDP per capita in PPP (US \$) in country i in year $t_0 + T$

T = period length

\hat{a} = speed of convergence

\hat{a}_{i,t_0,t_0+T} = distributed lag of the error terms, \hat{a}_{it} , between years t_0 and t_0+T

If beta-convergence exists, coefficient of initial GDP per capita should be negative and \hat{a} must be positive, and this will be true if $\hat{a} > 0$. Parameters for equation (1) can be estimated using a log-linear model with values of \hat{a} -coefficients across the ASEAN countries for the period from 1990 to 2008

In addition, existence of some exogenous convergent clubs in the ASEAN has also been analysed among some groups of ASEAN countries. Country groups are shaped according to the criteria of HDI. The importance of economic development (human capital, health, infrastructure etc.) have been demonstrated since a long time ago (Gillis et al., 1987). Recently, the New Growth Theory insisted on the crucial impact of the initial development conditions for economic growth and convergence. For that purpose, the paper first focused on the classification of the United Nations Development Program based on the Human Development Indicator [HDI]. Nevertheless, it fixed a threshold value of 0.6 so that there were two groups: the High/Moderate Human Development Indicator [HMHDI] group and the relatively Low Human Development Indicator [LHDI]. The two groups thus formed are group 1 having high HDI i.e. Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunie-Darussalem and Vietnam. The group 2 having low HDI i.e. Lao PDR and Cambodia.

RESULTS AND DISCUSSION

For the preliminary analysis the simple correlation coefficient have been calculated between log of per capita GDP (1990) and the average growth rate of per capita income between 1990 and 2008. The simple correlation between them is found to be -0.88 which is significant at 1 percent level of significance. Figure 1 represents the relationship between the log of per capita GDP (1990) and the growth rate of per capita income between 1990 and 2008 for nine ASEAN countries. The analysis of the relationship between the initial log of per capita income (1990) in ASEAN countries and the average growth of per capita income between 1990 and 2008 for these countries has given a negative relationship between these two variables which indicates that the countries which have low per capita income in the initial stages grow

faster than the countries with high per capita income. Further the $\hat{\alpha}$ convergence was applied. The value of $\hat{\alpha}$ is -0.01339 which is significant at 1 percent level of significance. Whereas, the value of $\hat{\alpha}$ is positive and is significant at 1 percent level of significance (Table 2). Hence, there exists an absolute convergence in ASEAN countries for the said period and are approaching towards a common steady state. This study is in contrast with that of Lim and McLeer (2004) which found insignificant $\hat{\alpha}$ in the case of ASEAN-5 founding

members. The possible reason for significant difference in the results might be the consideration of all the nine members in the country and consideration of GDP per capita in PPP.

To assess the extent to which there has been σ convergence across ASEAN countries, the unweighted cross-sectional standard deviation of the log of per capita income has been used. Figure 2 displays the behaviour of the dispersion of GDP per capita. The dynamic sequence in

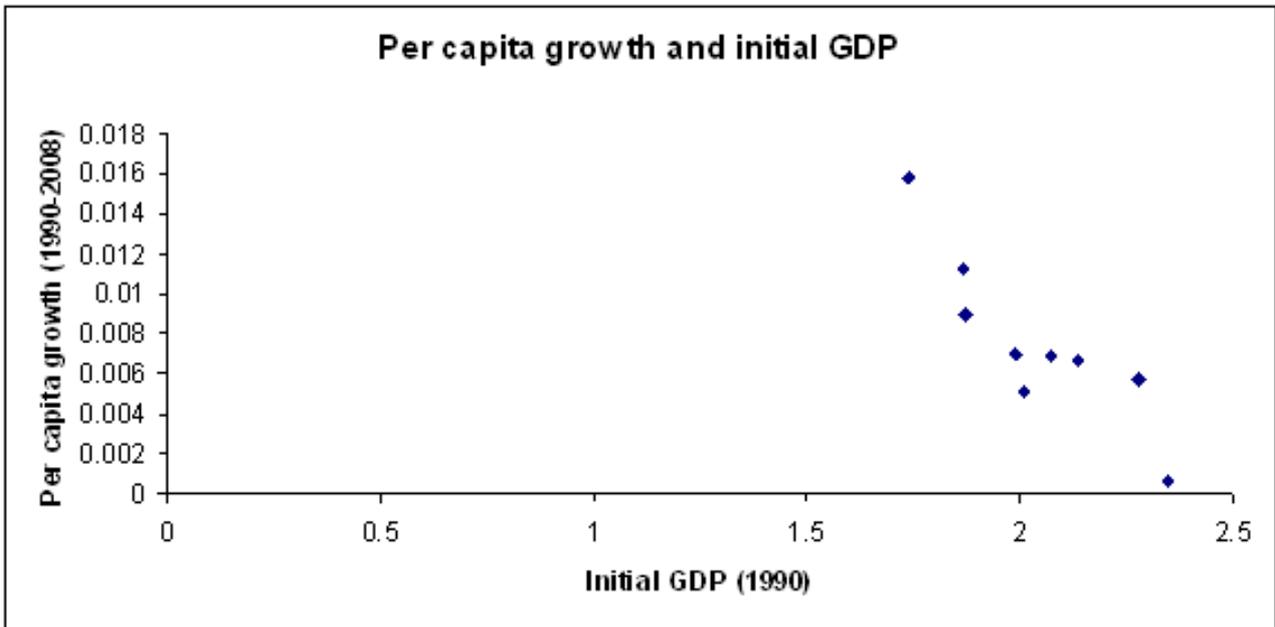


Figure 1: Per capita growth and initial GDP

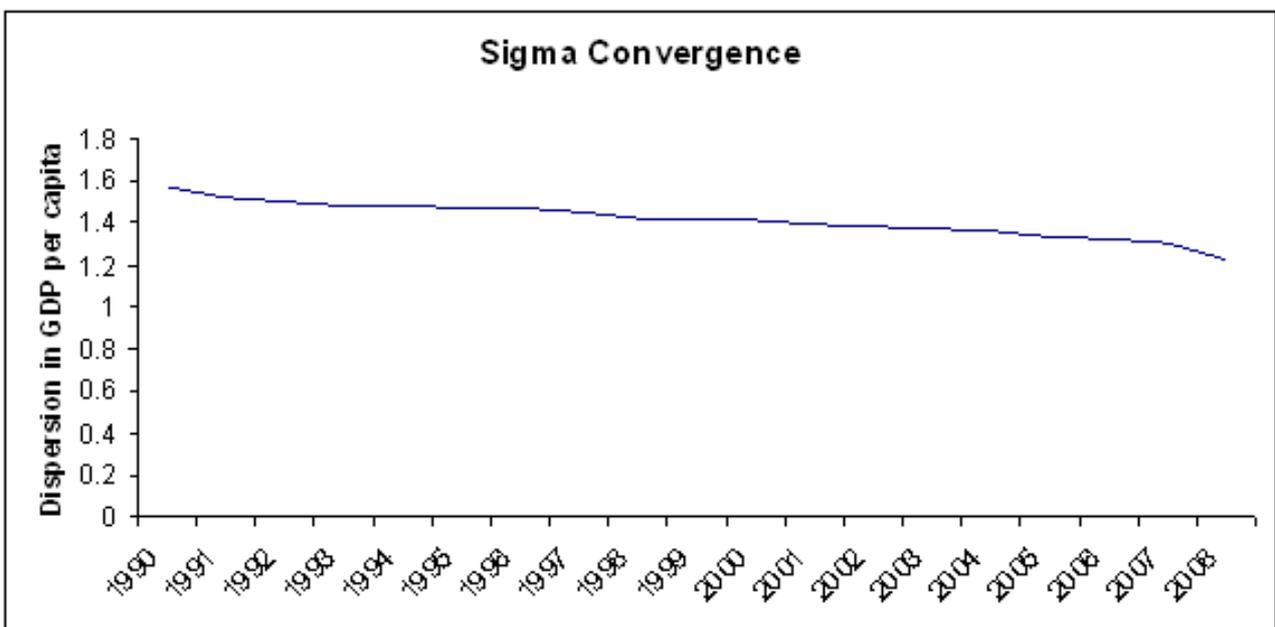


Figure 2: Sigma Convergence of GDP per capita in PPP (US \$) from 1990-2008

Figure 2 suggest a reduction in GDP per capita over the period of 1990 to 2008 showing that cross-country income during this period is equalizing steadily and slowly. A closer scrutiny further revealed that the standard deviation showed a 21.73 percent decline over the eighteen years displaying evidence of σ -convergence according to the criteria used by Friedman and Sala-i-Martin.

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Further, convergence was tested excluding the countries with low human development index (HDI), Lao PDR and Cambodia, and showed value of B to be -0.01127 which is insignificant. This is the indication of no-convergence in the

ASEAN countries if these countries are excluded. The convergence was then tested with the help of σ -convergence as $\hat{\alpha}$ -convergence is the necessary but not the sufficient condition for examining convergence. In this study it was revealed that if Lao PDR and Cambodia if excluded from the group the standard deviation increases over a period of 1990-2008. Thus it further supports the outcome of $\hat{\alpha}$ -convergence that if these countries are excluded convergence of GDP per capita is not achieved. Thus, it can be said that the countries which are low on HDI, if included in ASEAN group, starts catching up with the other high per capita income economies. This reveals the success of regional economic integration and the fruits of development are reaped by not only high per capita income but also by low per capita income economies.

To further validate the results, convergence was separately tested for pre and post South East Asian Economic crisis. It was found that in the pre-crisis period (1990-1998) the $\hat{\alpha}$ is insignificant indicating that the GDP per capita was diverging. But during the post-crisis period the $\hat{\alpha}$ (0.0076) is significant at 5 percent level of significance. Thus the convergence is present in the post crisis period however speed is slow. The convergence of GDP per capita might be due to the fact that most of the economies in the ASEAN countries are small and they are following more or less

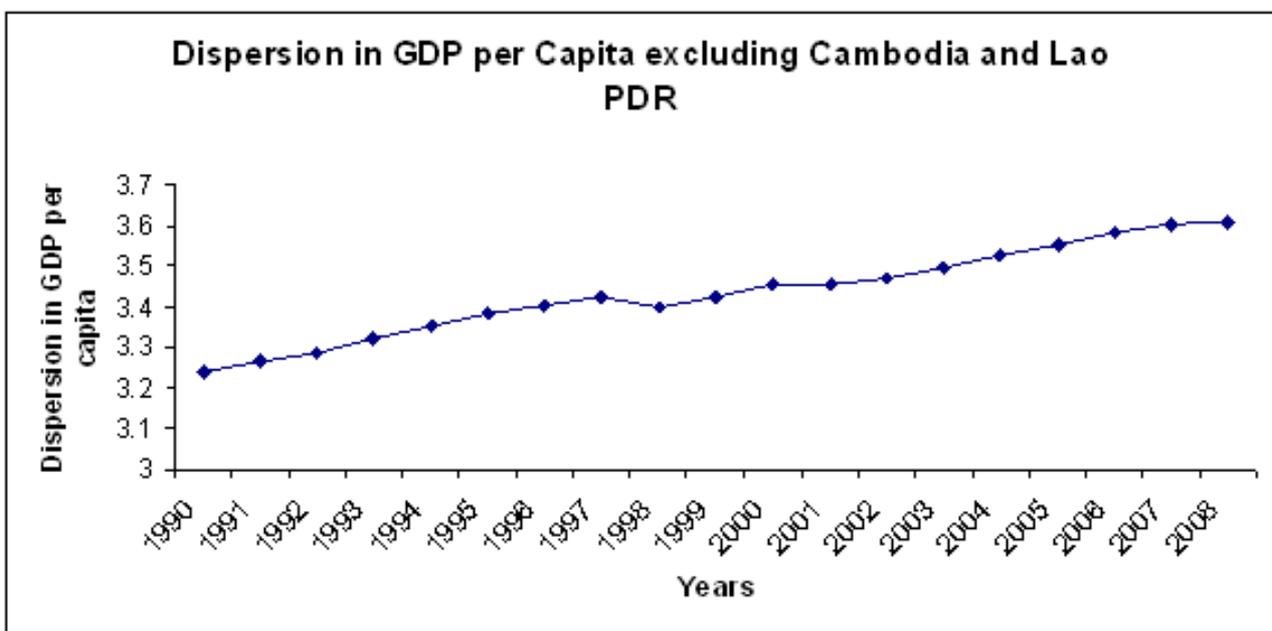


Figure 3: Dispersion of GDP per capita excluding Lao PDR and Cambodia

same policies. For example in all these countries their share of total trade to GDP is very high and all these member countries are thriving on the tourism.

CONCLUSION

The neoclassical approach, which guided our analysis, suggests that if economies are similar, we would find absolute convergence and σ convergences. Our finding of $\hat{\alpha}$ and σ convergence suggests that ASEAN countries are converging towards common GDP per capita steadily but slowly. However, while convergence has occurred, the speed at which the initially poor countries are catching up with the initially rich countries is slow. This study is in line with Jones (2002) who has found the similar results for ECOWAS, a regional economic integration group of Africa. In this study it is quite interesting to note that low income economies like Lao PDR, Cambodia and Vietnam are catching up with the high per capita income economies thus supporting the hypothesis of Solow.

For some of the low-income countries in ASEAN, big differences in per capita GDP across countries have to be regarded as undesirable for the economic integration process. The policy discussion of economic integration in the region is based on the idea that the convergence in per capita income depends on convergence in certain macroeconomic characteristics like inflation, public sector deficit, and external accounts. Hence the focus has been largely been on the question of to what extent convergence in these factors can be achieved. As the rate of convergence is slow, it can be said that more proactive economic policy coordination would be beneficial to the region and should be encouraged.

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DEVELOPMENT OF EMOTIONAL LABOUR SCALE IN INDIAN CONTEXT

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This paper reports the development and validation of Emotional Labor Scale (ELS) as tested on samples collected from selected B-Schools of India. The ELS is a 12-item self reporting questionnaire that measures four facets of Emotional Labor (EL) in the work place, which includes emotional display, deep acting, surface acting and automatic regulation. Estimates of internal consistency for the subscales range from 0.67 to 0.89. Exploratory factor analysis results provide support to the four facets of ELS. Evidence is also provided for convergent and discriminant validity of ELS.

INTRODUCTION

There is a dearth of research in the field of Emotional Labor (EL) in higher education. Emotional labor increasingly features in variety of services, for example, hotel and leisure (Bryman, 1999), supermarkets (Rafaeli, 1989), air travel (Hochschild, 2003), fast food (Hall, 1993), nursing home care (Lopez, 2006), academics (Ogbonna and Harris, 2004) etc. Hence, a small number of cases in which it has been researched, is in the feminist literature especially pertaining to health care units and other service sectors. Further, research activities on EL are grounded in the traditional service sector (Bagilhole and Goode, 1998; Sachs and Blackmore, 1998; Bellas, 1999; and Hort *et al.*, 2001). However, recently research has also expanded to masculinist literature (Mann, 1997; Harris, 2002; and Strongman and Wright, 2008).

For the purpose of this paper, the belief that higher education is operating in the managerialism paradigm is accepted (White Paper, 2003). This implies that B-schools in India are turning out to be business houses. In the light of this assumption, Willmott (1995) had asserted that the student is perceived as a customer and the degree awarded by a university is perceived as a passport to the corporate world. Thus, the role of the academics is that of a service provider who treats students as customers. Extensive research on service organizations have emerged with the findings that employees should perform as a customer/

provider interface, and it is a means to gain competitive advantage.

The customer driven system even demands that teaching staff perform EL so that negative emotions are under control, and not let the customers feel disgruntled. They expect performance at the time of the execution of duties, thereby, adding value to the teaching and learning activity being experienced by the customers (students). The employee's behaviour requires emotional labour (Hochschild, 1983), where employee behaves as a front line manager not as the top management, has to either conceal or manage actual feelings for the benefit of a successful service delivery. Teaching staff, in higher education, are expected to perform emotional labour in order to achieve the dual outcomes. This signifies that the generated outcomes are perceived as customer (Gibbs, 2001) satisfaction, and profit for the management.

MANAGERIALISM

Managerialism has emerged from critical literature (Willmott, 1995; Mok, 1997; Giroux, 1999; Simkins, 2000; Meyer, 2002; O'Brien and Down, 2002) which has thrown light on changing paradigm of education institution where they are focusing on quality, efficiency, effectiveness, predictability and substitution of human technology with non-human technology (Ritzer, 1993). The whole transformation of education institution to service provider

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encompasses formal and external inspection including evaluation of teaching and research paired with resource and financial implications. It is also called McDonaldisation of education signifying standardization and control in higher Education (Ritzer, 1996). It emphasizes on the ideology of rationalization where the education institution fosters the rationalization of workplace and rationalized homes (Ritzer, 1993). In the opinion of Willmott (1995), the education institute believes that the students are to be treated as customer it remits the message that the university has become part of the corporate agenda. It has transformed the degree into a commodity in other word known as a meal ticket. Further, the role of the academician is that of a service provider who treats the student as a customer as she (the academic) aims to receive excellent ratings, and thus continued tenure and research funding. Maaret Wager (2001) in a paper presented at a higher education conference informs us that more and more measures of performance serve to control and coerce academics. This kind of transition of role from academician to service provider generates incongruent demand within a role theory paradigm. Inside this conceptual framework, conflict manifests as the service provider violates the requirement of one role while fulfilling the demands of other (Varca, 2009). The increasing workload on academics is more associated with increasing administrative work, accountability, performance management, and documentation along with increasing number of applicants. This kind of workload potentially take teachers away from core purpose of education i.e., teaching, research and commitment to students (O'Brien and Down, 2002). Apart from the above discussion, the role conflict among academics is not only arising from blurred core values of higher education but the change in its role. Higher education is synonymous with trainability (Bernstein, 2000) and employability (Levidow, 2002). Given such changes, there is a likelihood of change in pedagogical relationship of academics towards student, demanding more empathetic relationship with students (Gaililaer, 2004).

Higher education in Hong Kong has established the quality assurance committee to minimize the wastage of funds allocated for

research purpose. They have established rigorous system for evaluating performance of the academician as quoted by Mok (1999). Along with approaches of customer service provider in higher education there are different measures have been introduced like total quality management, reengineering, statistical processing control, employee involvement and just-in-time production (Rhoades and Smart, 1996). On the other hand, it is also said the customer service provider approach has reinforced corporate kind of relations among students and academicians unlike the social relationship between them. Given the condition, it can be asserted that invasiveness of emotional labour in service delivery (including teaching) is deeper still, for the exception of it, fuzzy, and implicit, comes from customers (students), who want more than pleasant platitudes and competent service, instead authentic caring, otherwise then see falseness of the false. They know of the deceit but want to feel that they are different and enjoy the empathy of the teacher (Constanti and Gibbs, 2004). Thus the performance of emotional labour plays a significant role in the transformed system of higher education.

LITERATURE REVIEW

None of the research paper on emotional labour has cited the work of Allport (1940) which consisted emotional flavour. Howsoever, if we trace EI origin, Allport had mentioned continuous demonstration of empathy and unconditional **positive** dispositions to elicit positive emotions as a critical part of personality traits. This distinguishes leaders from non-leaders. Goffman (1959) was among the first researchers to observe that behavior is guided by certain socially desirable emotions and these socially desirable emotions are set up as norms. Across a number of occupational roles, the act of dispositions of socially desirable emotions becomes a basis of EL (Ashforth and Humphrey, 1993). Emotional labour is conceptualized as impression management of service employees (Ashforth and Humphrey, 1993; Hochschild, 2003), to make them appropriate or consistent with a situation, role, or an expected organizational behavior (Mumby and Putnam, 1992). This labor requires effort, planning, and

control to express organizationally desired emotion during interpersonal transactions (Morris and Feldman, 1996: 987). An employee working in any service sector should adhere to norms for appropriate behavior or expectations that are established by organizations. Such kind of expressions of emotions is found across occupational roles and at the customer-industry interface (Ashforth and Humphrey, 1993). This forms the basis for EL. Hochschild's (1983) has pioneered in this field and found that employees undergo through dissonance either by simply altering their displayed feelings (surface acting) or by internalizing the appropriate feelings within themselves (deep acting). Deep acting involves alignment of desired emotions and one's true feelings (Grandey, 1998). One not only attempts to control physical display but endeavour to modify internal feelings (Brotheridge and Grandey, 2002). Surface acting is superficial and in sincere wherein the physical display doesn't match with internal feelings (Ashforth and Humphrey, 1993 and Zapf, 2002). This does not signify that EL always leads to emotional dissonance (Zerbe, 2000).

The first unidimensional measure of emotional labour was used by Wharton (1993). The construct was based on frequency of customer contact. Kruml and Geddes (1998) operationalised EL to be the combination of emotional effort and emotional dissonance. The thinker had a different set of opinion about the whole construct. They described emotional effort to be emotional management where one controls negative emotion after being trained. On the contrary emotional dissonance is associated with emotional detachment from customers. While performing EL, employees regulate their emotional display in an attempt to meet organizationally-based expectations specific to their roles. Ashforth and Humphrey (1993) conceptualized EI to be the act of displaying appropriate emotions (i.e., confirming with display rules). They emphasized it as the act of behavior rather than the internal state or process driving such behavior. Such expectations determine not only the content and range of emotions to be displayed (Hochschild, 1983), but also the frequency, intensity and the duration that such emotions should be exhibited (Morris and Feldman, 1996).

In expressing the desired emotions, employees may experience emotional dissonance and emotional harmony. The former occurs when feelings differ from expressed emotions owing to incompatibility between organizationally based expectations and actual feelings held by the workers (Morris and Feldman, 1996 and Zerbe, 2000). Indeed, both Ashforth and Humphrey (1993), and Morris and Feldman (1997) argued that workers may genuinely feel the emotions displayed. In such cases, EL has more to do with managing the appropriate emotions rather than faking (i.e., expressing unfeelt emotions) or by creating illusion through (Brotheridge and Grandey, 2002) the appropriate feelings within themselves (deep acting).

Hochschild's (1983) study and other more recent research show that EL can affect the well-being and performance of workers in a cross-section of occupations such as nurses (Smith, 1992), hospital workers (Wharton, 1993), debt collectors (Sutton, 1991), waiters and waitresses (Adelmann, 1995), cashiers (Rafaeli, 1989; Rafaeli and Sutton, 1987; and Tolich, 1993) and Disney employees (Van Maanen and Kunda, 1989). More recent conceptual work suggests that EL should be operationalized as a multi-dimensional construct that could have differential impact on employee outcomes. This is well described in Grandey's (1998) model, as well as the four-facet model of Morris and Feldman (1996).

Despite these recent theoretical advances, few attempts have been made to develop a psychometrically rigorous multidimensional measure of EL. Wharton (1993) used a three-dimensional construct of EL based on the frequency of customer contact. Best *et al.* (1998) measured employee perceptions of the requirements to express positive emotions and suppress negative emotions as part of one's work role. More recently, Kruml and Geddes (1998) operationalized EL as a combination of emotional effort and emotional dissonance. They found that emotional effort was associated with greater training in emotional management, less experience in working with the public, and customers showing negative emotions. Emotional dissonance was associated with emotional detachment from customers,

customers showing negative emotions, and little latitude in emotions that can be displayed.

Given the paucity of studies that have measured EL as a multifaceted construct, the purpose of the present study is to develop and validate such an EL measure. The study has drawn conceptual understandings from the work of Hochschild (1983) and Morris and Feldman (1996). The author measures surface and deep acting as two separate dimensions. The study also measures emotion-related role requirements, specifically, the duration of interactions, frequency, intensity and a variety of emotional display. These are expected to foster a perceived need for effort (i.e., surface and deep acting). It is important to distinguish between surface and deep acting. More recently however, Zapf (2002) has used action theory to describe a third way of performing EL known as automatic regulation. He asserted that the regulation of emotion could be either automatic or controlled. Automatic regulation is the automatic display of an organizationally desired emotion deriving from an emotion that is spontaneously felt. This was later on confirmed by Diefendorff, Croyle, et. al., (2005) as naturally felt emotions. To understand the multifaceted nature of EL, the author has done this study.

METHODOLOGY

The Study: The paper is an attempt to study factors that support four facts of emotional labour by developing an emotional labour scale in Indian context.

The Sample: The participants composed of 140 academicians ranging from Assistant Professors to Professors. The data was collected from different private institutions of Orissa. Data collection took place in the year 2008 over a period of three months. It was done in two phases. The first phase was a pilot study which was conducted in the state of Orissa. After confirming the multi-dimensional nature of Emotional Labor Scale (ELS) and the four factors construct, a second phase of data collection was done. In the second phase, targeted respondents belonged to private MBA institutions of India. The responses from academicians holding full time positions were solicited. In the first phase, the survey found that in most private institutes,

the positions remain unfulfilled. So, the responses were found to be less as compared to the second phase of data collection of survey. The second and the final phase of data collection consist of 491 usable surveys for an 86 percent overall response rate. A total of 385 men and 106 women faculties responded, while the average age was approximately 36 years ($M = 35.8$, $SD = 8$). Respondents reported an average of roughly five years of tenure in their current positions ($M = 5.45$, $SD = 7.90$). On an average, the workload came to be nine ($M = 8.56$, $SD = 8$). Assistant Professors ($N = 330$) made up the largest survey group for the present study, followed by Associate Professors ($N = 98$) and Professors ($N = 63$). Finally, few respondents were holding Ph.D. degrees (29%).

Tools for Data Collection: Emotional labour scale was used for purpose of data collection. All the measurement items were adopted from the existing scale. Based on a review of the literature on each construct and the existing scales, a list of 21 items were prepared for measuring constructs. For adopting and refining, the measures in the study were tested in the first phase of survey, synonymously known as pilot study. Scale indicators for face validity provided comments were checked from experts in the field of management and belonging to premier B-schools of India. After the inputs given in the pilot study, it was possible to adapt the scales for EL from a six-factor model of Morris and Feldman (1996) and Zapf (2002) consisting of 21 items. The scales for EL consisted of facets like deep acting, surface acting, and automatic regulation, variety of display of emotions, frequency and intensity and duration of emotional expression.

Tools for Data Analysis: Exploratory factor analysis using principal factor extraction with varimax rotation was used for purpose of data analysis.

RESULTS

Development of Emotional Labor Scale (ELS)

Existing theory and empirical research (Morris and Feldman, 1996 and 1997; and Zapf, 2002) served as the basis for generating a pool of 21 items for ELS. The overall aim was to construct

the ELS so that: (a) the items were simple (i.e., reflecting a single construct) and relatively neutral in wording; and (b) it was fairly brief, thus, reducing the respondent burden was selected for the study. This initial pool of items was revised based on feedback from faculty members, then pre-tested using a convenience sample of faculty at universities located in Orissa (N = 97). The ELS employed a 5-point Likert scale with the following anchors: never (1), rarely (2), sometimes (3), often (4) and always (5). Based on an analysis of the results of this pre-test, several items having low levels of variance and high levels of skewness and kurtosis were eliminated.

The purpose of phase 1 was to further refine the ELS so that only the items that clearly represented the construct under consideration were selected. The 21-items ELS was administered to a convenience sample of 97 faculty enrolled in various graduate level business classes at a university located in Orissa. Participants included 61 men and 36 women. They were employed on a full-time basis covering all levels: Lecturers (N = 29), Senior Lecturers (N = 25), Assistant Professors (N = 20), Associate Professors (N = 15) and Professors (N = 8). They were, on average, 35 years old (SD = 4.92) with a mean of 5 years work experience (SD = 4.32).

Factor Structure: An Exploratory Factor Analysis (EFA) using principal factors extraction with varimax rotation as elicited in Table 1 was performed on the items from all the scales developed for this study (display, automatic regulation, deep and surface) as a means of examining the factor structure of ELS. EFA extracted four factors (all with Eigen values greater than 1) which accounted for a total of 80% variance. The factor that accounted for the largest amount of variance (32%) was labeled surface acting, given that it contained all the items for surface acting. Consistent with other scale development studies (e.g., Glover *et al.*, 1994), items with item-total correlations falling below 0.40 and cross-factor loadings above 0.20 were excluded. Thus, from 21 it reduced to 12 items: three items explaining automatic regulation, three items for deep acting, three items for surface acting and three for display of emotions. The validity was measured through

principal component analysis. Cronbach Alpha for all the measures of scale was above 0.75.

Internal Reliability: The values for internal reliability for each of the subscales and their respective means, standard deviations and inter-correlations are presented in Table 2. For the most part, the item-total correlations achieved were at 0.70 or greater and the subscales demonstrated adequate levels of internal consistency (Cronbach's α) values ranged from 0.68-0.89). There were items which displayed levels of internal consistency below 0.40 which were discarded. In order to validate the structure here, the author has used AMOS 3.6. It has employed maximum likelihood estimation procedures to conduct confirmatory factor analysis to determine the fit of the measurement model to the data. It has also sought to find out the uni-dimensional nature of each facet by estimating discriminant and convergent validity of ELS. Several fit indices were used to separately evaluate and compare across CFA models. The χ^2 , goodness of fit, adjusted goodness of fit and Root Mean Square Error of Approximation (RMSEA) provided information on the overall fit of the data to each model. Three comparative indices were used: χ^2 difference test, the Tucker-Lewis Index (TLI) and the Parsimonious Normed-Fit Index (PNFI). Both TLI and PNFI indicate the decline in fit of a given model relative to the baseline.

In particular, we compared the fit of three models including: (1) the four-factor model; (2) seven-factor model; and (3) independence model (null model). The items for surface acting, deep acting, automatic display and variety in display were allowed to load onto respective factors in the four-factor model. Items like, the duration, intensity and variety were allowed to load onto one latent composite factor. In seven-factor models, all the dimensions were allowed to load onto their respective factors. In the independence model, all paths were constrained to equal zero. This model was used as a means for determining the improvement of the fit achieved by the four-factor and seven-factor models. As indicated in Table 3, the four-factor model has achieved an acceptable fit with the data as evidenced by its non-significant χ^2 value ($\chi^2 = 80.64$ [130], $p = 0.25$). The values obtained

for the goodness of fit index, the adjusted goodness of fit index, and the TLI were all above the 0.90 level, considered to be an acceptable level of fit (Bentler and Bonett, 1980) RMSEA is adding to goodness of fit for four-factor model as it is less than 0.05 and is considered to represent a good fit model (Browne and Cudeck, 1993, as cited in Arbuckle, 1997). It is also evident that the goodness of fit is proved more with four-factor model with higher degree of freedom (130) compared to seven-factor model with lower degree of freedom (89). Besides that the four-factor model is more parsimonious and superior than the seven-factor model.

Convergent and Discriminant Validity: In order to establish the convergent validity of ELS, it is necessary to demonstrate its correlation with scales which measure the same constructs or with scales that one would expect to be associated with it (Nunnally and Bernstein, 1994).

Discriminant validity is established by the presence of non-significant or low correlations with scales that one would not expect to be associated with the subscales of ELS as a means of demonstrating that the ELS measures something different from existing methods (Nunnally and Bernstein, 1994, p. 93). Its correlations with existing scales which measure related constructs should not be extremely high. Given the preceding discussion, respondents completed several additional measures in this study. Their intercorrelations and coefficient values are presented in Table 4.

CONCLUSION

The objective of the study was to develop and validate an EL scale. It provided evidence of the reliability and convergent and discriminant validity of the ELS. The subscales demonstrated an adequate degree of internal consistency as indicated by Cronbach's α . Additionally, a Confirmatory Factor Analysis (CFA) indicated that items loaded only onto their respective latent variables, thus, demonstrating the unidimensionality of each factor. Respondents appeared to be able to distinguish between the various role characteristics (i.e., variety of emotional display, surface acting, deep acting and automatic regulation of emotions). But the response was too poor towards three factors like

intensity, frequency and duration. Reason can be inadvertently attributed to the difficulty in quantifying the emotions on the part of academicians. The variety in emotions, duration and intensity seem to be of unitary construct which is in conformity with Morris and Feldman findings (1996 and 1997). Further, the academicians did not respond distinctively to these dimensions as they may hold global impressions towards the emotional role requirements. This led to the development of four-factor ELS instead of seven-factor ELS. Morris and Feldman (1996) study has concentrated more on the controlled forms of emotional regulation normally leveled as surface and deep acting. However, emotional regulation as per Zapf (2002) consists of both the dimensions called automatic and controlled processes by which individual influence different dimensions of emotions. Nonetheless, the study differs from the past studies in explaining the construct by not only including the internal mechanism of emotional regulation but also physical display in forms of variety of emotions. The low to moderate correlations between the ELS subscales and other scales demonstrated both its relationships with associated scales and its ability to be adequately distinguished from other scales.

IMPLICATIONS OF STUDY

First of all, the multifaceted construct of EL has come out to be true. Secondly, compared to Morris and Feldman findings (1996 and 1997), this study is remarkably different in terms of nature of EL and number of facets most applicable in the Indian context. EL performed is more contextual and internally dependent. There is a possibility of emotional deviance which suggest a difference between displayed emotions and desired external expectations when emotional regulations are of controlled forms. Whereas the natural felt emotions in other word known as automatic regulation may not suffer from emotional deviance since it is an unconscious strategy. This further signifies that the comparative study between the impact created by automatic form of emotional regulation and controlled form of regulation on dependent variable can be examined. Future studies may investigate the relationship between performance of emotional labour and the role

conflict arising due to the paradigm shift of education towards managerialism where the expectations of organizations and customers differ. Given the condition of high stress and burnout due to performance of emotional labour does it invariably influence teaching effectiveness optimistically? Does preference for automatic and controlled regulation differ on the basis of individual's personality? Is it context dependent?

Mentoring responsibilities have become integral part of academic system which facilitates academic excellence. Does it involve performance of emotional labour to make mentoring programmes more effective? Does it invariably involve the regulation of negative emotions in academic context? Is there any difference between performance of emotional labour in academics and those of other service sectors? Further, the implications can be stated as "facets of EL can have different meaning in various industrial sectors". This further indicates that the nature may vary between service and non-service sectors. The edifice of future research can be built on the understanding of this paper. The multifaceted nature of EL can be further explored with new dimensions in various industrial sectors. The facets can have same or different implications in various sectors. ELS facilitate the further research for understanding the implications of emotional management as an intervention strategy. It can be possibly used to understand the linkage between performance of EL and operating costs and organizational performance.

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Table 1: Factor Analysis Results

| Item No | Items | Surface Acting | Deep Acting | Display of Emotions | Automatic regulation |
|---|--|----------------|-------------|---------------------|----------------------|
| V6 | I often have to suppress my emotions at work | 0.99 | - | - | - |
| V11 | I make an effort to actually feel the emotions that I need to display. | 0.99 | - | - | - |
| V12 | I try to experience emotions that I must show. | 0.62 | - | - | - |
| V2 | I feel emotionally involved in my job. | - | 0.86 | - | - |
| V3 | I experience emotions on my job, such as anger and excitement. | - | 0.83 | - | - |
| V4 | Sometimes the emotions that I experience at work carry over home. | - | 0.84 | - | - |
| V1 | I unconsciously show desired emotions as expected by others. | - | - | 0.91 | - |
| V5 | I display authentic emotions which are pleasant to others. | - | - | 0.92 | - |
| V14 | I display emotions that are spontaneously felt. | - | - | 0.93 | - |
| V7 | I hide my true feelings when situation demands | - | - | - | 0.84 |
| V10 | I pretend to have emotions that I really don't have. | - | - | - | 0.85 |
| V13 | I resist expressing my genuine feelings. | - | - | - | 0.88 |
| Note: Extraction method: Principle Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 9 iterations. | | | | | |

Table 1: Results of Exploratory Factor Analysis (N = 97)

Table 2: Mean, Standard Deviation, and Cronbach a of the Variables (N=491)

| Variable | Mean | Standard Deviation | No.of Items | Cronbach α |
|----------------------|-------|--------------------|-------------|-------------------|
| Display | 7.57 | .86 | 3 | .76 |
| Automatic regulation | 10.42 | 1.01 | 3 | .67 |
| Surface | 7.57 | 1.23 | 3 | .86 |
| Deep | 9.84 | .89 | 3 | .89 |

Table 3: Goodness- of -fit indices for the proposed six factor model, a four factor and null model

| | χ^2 | df | p | PNFI | GFI | AGFI | TLI | RMSEA | χ^2 difference |
|---|----------|-----|-----|------|-----|------|-----|-------|---------------------|
| 7-factor model | 175 | 89 | .15 | .69 | .81 | .87 | .91 | .20 | 1,464.67 |
| 4-factor model | 80.64 | 130 | .25 | .78 | .96 | .93 | .95 | .01 | 1,650.15 |
| Null model | 1783.10 | 167 | .00 | | .38 | .25 | .01 | .29 | |
| N= 491, PNFI=Parsimonious normed-fir index, GFI=goodness-of-fit index, AFGI=adjusted-goodness-of-fit-index, TLI= Tucker- Lewis Index, RMSEA= root mean square error df approximation. These are the results of the χ^2 difference tests for the six factor and four factor model are as follows: χ^2 difference= 185.48, $p < .001$ | | | | | | | | | |

Table 4: Intercorrelations Between Factors of ELS (N=491)

| Variable | Display | Automatic Display | Surface | Deep |
|-------------------|---------|-------------------|---------|--------|
| Display | - | .286** | -.238* | .087 |
| Automatic Display | .286** | - | .335** | .434** |
| Surface | -.238* | .335** | - | .375** |
| Deep | .087 | .434** | .375** | - |

Note: **p<0.01 Level and *p<0.05

Table 5: Intercorrelations between Variables (N=491)

| Variable | 1 | 2 | 3 | 4 |
|-------------------|--------|--------|--------|--------|
| Display | 1 | .286** | -.238* | .087 |
| Automatic Display | .286** | 1 | .335** | .434** |
| Surface | -.238* | .335** | 1 | .375** |
| Deep | .087 | .434** | .375** | 1 |

Note: **p< .001; *p< .01

IMPACT OF OCCUPATIONAL ROLE STRESS IN STRESS MANAGEMENT AMONGST PUBLIC AND PRIVATE SECTOR EXECUTIVES

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Stress management is based on the idea that stress is not a direct response to a stressor. Peoples resources and their ability to cope, mediate the stress response and are amenable to change, affects control of stress. In today's scenario we can observe more and more people having role stress. The increasing competition, bureaucracy micro task specialization work setting and technological innovation tends to generate a feeling of powerlessness and helplessness. The investigators have attempted to study the impact of role stress on high and low stress management amongst public and private sector executives. For this purpose a sample of 200 high stress management male executive and 200 low stress management male executive (N = 400) out of which 100 executive from public sector and 100 executives from private sector were selected from Lucknow by administering Singh & Srivastava (1994) Stress Management Scale. The occupational role stress scale developed by Pareek (1983) was administered to the total sample. It was hypothesized that there would be a significant relationship between role stress and stress management amongst public and private sector executives. Further more there would be a significant difference between the role stress mean of public and private sector executives that are private sector executive will report higher role stress on subscale in comparison to their counter parts. The result supported these hypothesized relationship and are discussed at length in this paper.

INTRODUCTION

Stress is the non-specific response of the body to any demand (Selye, 1956). It does not matter whether or not the stress is caused by pleasant or unpleasant things. Stress is the automatic state that results when the body is told to make changes in order to adapt to any demand. Managing stress successfully involves more than relying on the automatic symptom-reducing reactions to stress, as helpful as these may be. Managing stress means taking change, directing and controlling our response to stressors, thereby modifying the overall stress. There are many ways to accomplish this goal, but most of them fall under two major categories: the first one is 'modifying our environment' and the second one is 'altering ourselves' in some way.

In today's scenario we can observe more and more people having role stress. The increasing competition, bureaucracy micro task specialization, greater urbanization, work setting

and technological innovation tends to generate a feeling of powerlessness, meaninglessness, normlessness and helplessness. Kahn et al. (1964) were the earliest to draw attention to organizational stress in general and role stress in particular. Researches have focused their attention on the causal factors of stress, stress manifestations, moderators of stress strain relationship, types of stresses experienced by diverse work populations and various coping strategies/relaxation techniques adopted by organizational entities to cope with stress.

Pareek (1994) has defined role as a set of functions, which an individual performs in response to the expectations of others and his own expectations about the role. There are two role systems: role space and role set. Both have a built-in potential for conflict which is called role stress. The role space system is the system of various roles played by the person. Karasek (1990) is one of the most notable contributor to the field of occupational stress, He says that job stress

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occurs because the 'demands' of employment exceed the 'controls' of the individual needed to interact with those demands. Blumenthol (1995) demonstrated that the consequences of job strain are more severe for women than for men. Williams (1997) demonstrated that certain psychosocial factors known to predict increased risk of cardiovascular disease are higher among women who report higher levels of job strain. Kothari and Kothari (1999) studied role stress among professionals doctors and engineers. The finding revealed that the doctors reported significantly higher role stress scores in measures of inter distance, role ambiguity, role expectations conflicts, resource inadequacy, role erosion and role overload.

Engineers reported significantly higher role stress, scores than the doctors in measures of self role distance and role isolation. Empirical studies that compare different professions in terms of role stress reveal that individuals in different professions experience different types of role stress in varying degrees (Caplan et.al., 1975 and Moerisa Koch, 1979). Barkat and Parveen (1999) studied role stress among women bank managers and university teachers and found significant differences between the two groups. Role stress was experienced more by bank managers and less by university teachers.

Studies have revealed that the impact of stress on individuals has subjective, cognitive, physiological, behavioural and health facets to it. Therefore, the aim of the present study was to see the impact of role stress in stress management amongst public and private sector executives. The hypotheses formulated for the present study were:

H1: There would be significant negative relationship between role stress and stress management among public and private sector executives, i.e., high role stress experienced executives would be low on stress management whereas, low role stress experienced executives would be high on stress management.

H2: There would be a significant difference between the role stress mean of public and private sector executives i.e., private sector executives would report significantly higher role stress scores in comparison to their counterpart.

METHODOLOGY

The Study: The study tried to access the relationship between role stress amongst public and private sector executives.

The Sample: The final study was conducted on 200 high stress management male executives and 200 low stress management male executives (N = 400) out of which 100 executives were from public sector and 100 from private sectors in each group. The selection of the sample was purposive. They were matched on age, sex and educational status. The mean age of the subjects was 41.2 years. In order to ensure homogeneity with regard to socio cultural background the investigator collected data on the male executives in the public and private sectors situated in Lucknow city of Uttar Pradesh.

Tools for Data Collection: The stress management scale developed by Singh and Srivastava (1994) was used to assess stress management level of the employees. It consists of 30 positive and negative items related to stress management. The response are to be given on a five point rating scale ranging from never, rarely, sometimes, often and almost always is the lowest score given to an item 1 and highest score is 5. Organizational Role Stress Scale (ORS): Pareek (1983) developed and standardized the organization role stress scale to measure role stress in organization. The ORS scale measures 10 type of role stress viz self role distance (SRD), inter-role distance (IRD), role isolation (RI), role ambiguity (RA), role expectations conflict (REC), resource inadequacy (Rin), personal inadequacy (Pin), role stagnation (RS), role erosion (RE) and role overload (RO). The ORS scale consists of 50 items with a five point scale ranging from D-never or rarely to 4 very frequently or always. Thus, the total scores for each role stress ranges from 0 to 20.

Tools for Data Analysis: First and foremost Singh and Srivastava (1994) stress management scale was administered to about 600 public and private sector executives to ascertain high stress management and low stress management executives. Scoring was done on the basis of their scores. High stress management executives (100 public and 109 private) and low stress management executives (100 public and 100

private) were treated as the final sample for the study (N = 400). Occupational role stress scale was administered individually on the 200 high stress management executives (100 public and 100 private sector) and 200 low stress management executives (100 public and 100 private sector) one at a time in organizational setting. The data was scored using the appropriate scoring procedures and later subjected to systematic analysis.

The analysis of the data was done at three levels. Firstly, means and S.D. values were computed. Secondly, significance of difference between means (t-ratio) were computed between high stress management executive and low stress management executives and public and private sector executives for role stress. Thirdly, coefficients of correlations were computed in order to see the relationships among the role stress and stress management.

RESULTS AND DISCUSSION

The means and SD scores of occupational role stress sub scales are presented in Table-1 for low and high stress management/public and private sector executives.

Table-1 shows that on inter role distance (IRD) the mean scores of high stress management private sector executive was highest than the other sub scales (M = 10.25) whereas for low stress management public sector executives was lowest. (M = 8.10) than the other sub scales mean scores. The low stress management public and private sector executive mean scores were greater than their counterparts on IRD. On role stagnation (RS) the mean values of private sector executives both high and low stress management were greater than public sector executives. The low stress management public and private sector executives mean scores were found to be higher than high stress management executives.

On role expectation conflict (REC) the high stress management public sector executives mean score was found to be lowest than the other types of stress irrespective of any mean score i.e. 5.38. The high stress management executives mean scores (public and private sector) were found to be lesser in comparison

to low stress management executives (public and private sector). The mean score of role erosion among low stress management private executive was found to be lowest than other types of role stress (M = 9.70) for that group but otherwise it was highest mean score than others i.e., high stress management public and private sector and low stress management public sector for role erosion.

For low stress management public sector executives the mean score i.e. 10.50 was found to be highest than the other types of role stress for this group. Low stress management private sector executives mean score was found to be highest i.e. 11.82 than public sector executives and high stress management public and private sector executives. Similarly for resource inadequacy the same pattern of mean scores followed i.e. lowest for public high stress management executives and highest for private low stress management executives. For personal inadequacy, the low stress management private sector executives mean score was found to be highest than the other types of role stress (M = 12.25). It was highest score amongst all the mean scores in the table. The pattern was similar as for resource inadequacy.

On self role distance (SRD) the mean score for high stress management private executives was found to be lowest than other types of role stress for that 10 group (M = 6.86). It was followed by private executives of the same group i.e. 7.83 and low stress management public executives (M = 8.46) and lastly private sector executives (M = 10.80) of that groups. Role ambiguity mean score followed the similar pattern as SRD. Lower mean score was 7.93. High SM private executives followed by public sector executives of that group i.e. 8.32 whereas for low stress management public sector executives (M = 10.24) and private sector of that group (M = 11.45).

On role isolation the mean score of public high stress management executives was highest than the other role stress types in that group (M = 8.41). For the private sector executives (M = 8.32) which is more or less similar. The results show that as such no difference is there by public or private. For low stress management

public and private executives there was difference of 1.46. The low stress management private sector executives experienced more role isolation stress.

By looking at Table-1 the total mean score was greatest in low stress management private sector executives ($M = 112.3$) followed by public executives ($M = 92.25$) and then high stress management private executives $M = 88.21$ and least for public sector executives of that group i.e. 68.32. Significance of difference between means t-test was also applied between the private and public sector executives to see significant differences. The t-ratio for types of role stress and total are presented in Table-2.

By looking at Table-2 it is evident that the high SM Mean scores of public and private sector for IRD, RS REC, RE, RO, Rin have been found to be highly significant $p < .01$ level and for Rin t ratio is significant at .05 level. Apart from these for SRD, RA and RI mean significant differences have not been found, whereas for the low SM means scores of public and private sectors only for Rin mean difference is not found significant whereas for all the other eight sub scales t-ratios show high significant differences and for role erosion $p < .05$ level. However the total role stress t ratios reveal high significance level (See Table-2).

The results supported the hypothesized relationships. It was hypothesized that there would be significant negative relationship between role stress and stress management. The coefficient of correlation (r) was found to be significant at .01 level (-.34). The results showed that the total means scores on role stress was greatest in low stress management private sector executive ($M = 112.3$) than high stress management private sector executives ($M = 88.21$). It was found that low stress management public sector executives mean score was greater ($M = 92.25$) than high stress management public sector executives (68.32). However, private sector executives reported higher role stress scores in all the subscales of role stress in comparison to their counterparts.

The findings can be interpreted in the light of number of evidences. It is seen that the private sector executives stay in a pressure of job

insecurity. They have to play multiple role acceptance in family and work place. The nature of work and high quality demand of work is expected from them. They have to spend more time for their work than the public sector executives. Such overload cause many conflicting situation of stresses and strains. Studies have revealed that occupational stress is affected by subjects to job satisfaction. If a subject is satisfied with his/her job he will perceive comparatively less job stress. Job satisfaction is an important variable which needs to be studied in further research because many studies have been conducted to see a relationship between stress and job satisfaction and performance (Dunnette, 1973; Pritchard, 1973; Hall, 1969).

Kirkcaldy, Cooper and Brown (2005) explored the role of coping in the stress strain relationships. Occupational role stress was taken into account in the present study but work satisfaction and dissatisfaction were not taken. Attention should be paid on these variables as they are important contributors of stress. Gupta (2007) stated that unreasonably high expectations are roof cause of mental stress at workplace. In account statement by Settee (2007) it is believed that frequent change or sudden loss of job, social problems, high expectations issues with colleagues and long working hours lead to both physical and mental exertion. A study was conducted by Kumar (1989) to study role stress, self efficacy role satisfaction among public sector executives.

Kapur (1969) Surti (1982) Surti and Surupria (1981) on different populations and have traced the dominant role stresses. Stress is relatively an abstract construct that cannot be assessed directly. It can only be understood by assessing a complex system of variables and how these variables relate to one another over time.

CONCLUSION

Managing stress levels in the workplace has become a key business skill as the pressure to perform continues to increase. Executives need a range of skills to be able to maximize performance in a sustainable way and executives need to understand stress prevention and stress management techniques to cope effectively with stressed executives.

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Table-1: Showing Means and S.D. of different Groups on Occupational Role Stress Subscales and Total Role Stress

| S. No. | Sub Scales | High SM | | | | Low SM | | | |
|--------|----------------------------|---------|-------|---------|-------|--------|-------|---------|-------|
| | | Public | | Private | | Public | | Private | |
| | | M | SD | M | SD | M | SD | M | SD |
| 1. | Inter Role Distance | 6.59 | 2.56 | 10.25 | 3.21 | 8.10 | 2.24 | 12.10 | 2.35 |
| 2. | Role Stagnation | 7.74 | 4.22 | 10.23 | 2.78 | 9.34 | 2.20 | 11.02 | 4.32 |
| 3. | Role Expectations Conflict | 5.38 | 2.12 | 8.10 | 3.20 | 9.36 | 2.10 | 12.20 | 2.52 |
| 4. | Role erosion | 7.63 | 2.60 | 8.75 | 2.90 | 8.72 | 2.84 | 9.70 | 3.48 |
| 5. | Role overload | 8.35 | 3.20 | 9.30 | 3.10 | 10.50 | 3.02 | 11.82 | 4.20 |
| 6. | Resource Inadequacy | 8.00 | 2.18 | 10.14 | 4.00 | 10.38 | 2.88 | 11.50 | 4.00 |
| 7. | Personal Inadequacy | 7.66 | 2.10 | 8.33 | 2.31 | 8.35 | 3.02 | 12.25 | 3.29 |
| 8. | Self role distance | 7.83 | 2.12 | 6.86 | 2.00 | 8.46 | 3.72 | 10.80 | 2.86 |
| 9. | Role ambiguity | 8.32 | 3.12 | 7.93 | 1.98 | 10.24 | 2.10 | 11.45 | 4.21 |
| 10. | Role isolation | 8.41 | 2.79 | 8.32 | 2.12 | 8.80 | 3.21 | 10.26 | 3.90 |
| | Total Role Stress | 68.32 | 27.01 | 88.21 | 27.60 | 92.25 | 27.51 | 112.3 | 62.64 |

Table-2: Showing t Values between Public and Private high SM and low SM Executives

| S.No. | Sub Scales Type of Role Stress | High SM Public / Private Sector | Low SM Public / Private Sector |
|-------|-----------------------------------|------------------------------------|-----------------------------------|
| 1. | Inter Role Distance | 9.15** | 12.90** |
| 2. | Role Stagnation | 4.93** | 3.64** |
| 3. | Role Expectation Conflict | 7.10** | 9.16** |
| 4. | Role erosion | 2.82** | 2.22* |
| 5. | Role Overload | 2.20* | 2.64** |
| 6. | Resource inadequacy | 4.70** | 1.15 |
| 7. | Personal Inadequacy | 2.23* | 9.06** |
| 8. | Self role distance | 1.08 | 5.20** |
| 9. | Role ambiguity | 1.14 | 2.68** |
| 10. | Role Isolation | 0.27 | 2.92** |
| 11. | Total Role Stress | 35.62** | 88.55** |

MEASURING THE SATISFACTION OF FOREIGN TOURISTS: A STUDY IN MAHABALIPURAM AND KANCHIPURAM CITIES OF TAMILNADU

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This paper highlights HOLSAT Model which argues that the measurement of different attributes of tourist satisfaction can be categorized into 5 broad dimensions. It is called FIVE As, viz. attractions, activities, accessibility, accommodation, and amenity. The major strength of this model is that it utilizes and modifies the previous work in the areas of tourist satisfaction to develop a credible research instrument. The present study uses this Model in the measurement of satisfaction level of tourist traveling to the Mahabalipuram and Kanchipuram region of Tamilnadu. The present study was conducted with the objectives to measure the satisfaction level of foreign tourists visiting Mahabalipuram and Kanchipuram; to compare the level of satisfaction of foreign tourists visiting these places; and to identify the determinants that contributes to the tourist satisfaction by employing the HOLSAT Model. Suitable Statistical tools were applied and the study revealed key areas sought by the tourists that will be helpful for promoting Mahabalipuram and Kanchipuram regions of Tamilnadu as the tourist's destination. It provides relevant input for the development of Tamilnadu tourism.

INTRODUCTION

Tourism is defined as a short-term movement of people to areas some distance from their normal place of residence in order to indulge in pleasurable activities. It is the sum of phenomena and relationships arising from the interaction among tourists, business suppliers, host governments, host communities, origin governments, universities, community colleges, and non-governmental organizations throughout the process of attracting, transporting, hosting and managing of the tourists and other visitors (Weave and Lawton, 2002). Satisfaction is a key judgment made by customers about products or services and can heavily influence the success of a business (Bowen and Clarke, 2002). Tourism is an experience made up of many inter-related components and thus tourist satisfaction with a destination can be considered a cumulative measure of total consumption and purchase experience over time (Haber and Lerner, 1998). The development, survival, success and failure of tourism ventures depend largely upon the satisfaction of customers (Haber and Lerner, 1998). The growing complexity and

competitiveness of the global marketplace makes it imperative for destinations to promote a strong, positive image as they are more likely to be chosen by tourists (Hunt, 1975; Goodrich, 1978b; Woodside and Lysonski, 1989).

In order to create and maintain a favourable image it is important that the satisfaction levels of tourists at a destination are monitored. Positive experiences can encourage repeat visitation (Kozak and Rimmington, 2000) and attract positive word-of-mouth communication (Ross, 1993; Beeho and Prentice, 1997). The spread of word-of-mouth recommendation is considered the most effective means to market and promote a destination (Söderlund, 1998). Thus, ensuring the satisfaction of tourists can increase the competitiveness of a destination and influence the decision-making process of potential tourists. Furthermore, monitoring tourist satisfaction can help detect problems with a destination and enable action to be taken before a major crisis occurs. It is widely agreed in the literature that favourable tourist perceptions are positively related to customer loyalty and patronage, which is important for the long-term economic success of a destination (Akama and Kieti, 2003).

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Destinations must be effectively managed and all individual products and services that make up the tourism product must be considered in the formation and marketing of an overall positive image (Kozak and Rimmington, 2000). Tourism marketers strive to ensure the optimal positioning of a destination in a highly competitive marketplace (Beerli and Martin, 2004), although most destination-positioning strategies do not take into account cross-cultural differences, which exist within the tourism market. Culture encompasses an entire set of implicit, widely shared values, beliefs, expectations and traditions that characterize a particular social unit (Pizam and Jeong, 1996). The influence of national cultural characteristics on determining tourist satisfaction levels has not been given much consideration in the literature. However, cross-cultural studies (Pizam and Sussman, 1995; Pizam and Jeong, 1996; Kozak, 2001) indicate that satisfaction levels, tourist behaviour and tourist perceptions of a destination or service business may vary according to countries of origin.

LITERATURE REVIEW

There is much literature on different aspects of consumer satisfaction in tourism as well as an increase in literature on tourist satisfaction with domestic or international holiday destinations (Pizam and Milman, 1993; Weber, 1997). Tourism is a distinct service experience and the tourism product is made up of many different components. When investigating overall satisfaction with a tourist destination the individual products and services need to be identified and measured as levels of satisfaction with one attribute can affect overall tourist satisfaction (Pizam et al., 1978; Kozak and Rimmington, 2000).

Tourist satisfaction is critical for a destination's survival and success. Overall satisfaction with a tourist destination is strongly linked to intention to return and positive word-of-mouth communication, as demonstrated by research by Ross (1993). This is supported by a more recent study by Kozak and Rimmington (2000), which indicates that satisfied tourists are more likely to recommend the destination to friends and family. However, Kozak and Rimmington (2000) purport

that repeat business may not be as significant to the tourism industry as it is for other businesses as many tourists look for different holiday experiences regardless of satisfaction levels with a destination. This is supported by Moutinho (cited in Turner et al., 2001), who states that although extremely dissatisfied tourists may decide to change a destination for their holiday, satisfied tourists do not necessarily visit the same place again. However, these authors tend to refer to tourists traveling abroad and repeat visitation may therefore be more significant for domestic tourism. Furthermore, even though the effect of satisfaction on repeat visitation may not be profound for some destinations, research shows that it does influence customer loyalty and patronage and can therefore contribute to a destination's economic success (Akama and Kieti, 2003). The measurement of tourist satisfaction therefore has important implications for destination managers.

Mahabalipuram is an elegant place to watch which a well established sea port was during the 7th and 10th centuries of the Pallava dynasty. This was the second capital of the Pallavas who ruled Kanchipuram. Formerly, mahabalipuram was known and called as Mamallapuram. A very rude cruel king Mahabali reined this place and in a fierce battle king Mahabali was killed by Lord Vishnu and the place was named after the dead, arrogant kind Mahabali. It was during the reign of King Narasimha Varman I, the name Mahabalipuram was changed. It was renamed mahabalipuram which is called till now. The richness in mahabalipuram was not known to many, as these pallavas did not outlet and expose their quality and innovative creations to the outer world for obvious reasons. Every one can point out the rock - cut caves; temples made from a single rock, temples and strive of different structures, and bas-reliefs which are so artistic and sheer creativity. Mamallapuram is referred as an 'open-air museum'. The great pallava kings Narasimha I and Rajasimha have well preserved these stylistic qualities that one enjoys in mahabalipuram even in the present day. Kanchipuram is famous for hand-woven silk fabrics and saris. The weavers use the highest quality silk and pure gold thread. Kanchipuram is also known as Silk City. Sankaracharya 'Math' is situated at Kanchipuram.

Various researchers have conducted studies on the factors influencing perceived destination image. Scott et al. (1978) and Hunt (1975) demonstrate that distance from the destination affects image formation. They conclude that destination images are likely to be more realistic and stronger if people live close by, as they are more likely to have visited the area and to have been exposed to information about the destination. Based on this deduction, it can be assumed that domestic tourists are less likely to have extreme ratings of satisfaction with a destination than their international counterparts as their holiday experiences are likely to correspond more with their post-trip images. Destination image is also influenced by the characteristics of an individual, such as, age, gender, education, occupation, and social class (Beerli and Martin, 2004). An individual's personal characteristics and circumstances heavily influence the perceptive processes related to the selection, organization and interpretation of incoming information in order to create an image (Beerli and Martin, 2004). Thus, individuals develop their own personal perceived images of tourist destinations. This emphasizes the need to take into account the personal characteristics and circumstances of respondents when measuring tourists' perceptions of a destination. Due to the association of destination image with satisfaction, the methods used to measure perceived destination image are similar to those used to measure tourist satisfaction with a destination. Key attributes that affect destination image are likely to affect levels of satisfaction with a destination and it is therefore important to review the measurements of destination image proposed in the literature.

HOLSAT (HOLIDAY SATISFACTION MODEL)

The HOLSAT is a model developed by Tribe and Snaith (1998). It specifically tackles the issue of traveler's expectations which are examined prior to the arrival at the destination as compared to the actual level of satisfaction experienced after the holiday. It compares the performance of a wide range of the holiday attributes against a holiday-maker's expectations as a means of evaluating satisfaction with a particular holiday

destination or experience. This approach overcomes some of the limitations of other models in dealing with the concept of holiday satisfaction. The HOLSAT differs from the previous models while measuring satisfaction as the relationship between the performance and the prior expectation rather than the performance alone (SERVPERF, Cronin and Taylor, 1914), or performance relative to the best quality (an absolute) (SERVQUAL, Parasuraman, Zeithaml, and Berry, 1988). This model argues that the measurement of different attributes of tourist satisfaction can be categorized into 5 broad dimensions. It is called "FIVE As", viz. (1) attractions (2) activities (3) accessibility (4) accommodation, and (5) amenity. The major strength of this Model is that it utilizes & modifies the previous work in the areas of tourist satisfaction to develop a credible research instrument. The present study uses the model in the measurement of satisfaction level of tourist traveling to the Mahabalipuram and Kanchipuram region of Tamilnadu. Mahabalipuram lies on the Coromandel Coast which faces the Bay of Bengal. While, Kanchipuram is one of the seven sacred cities situated in Tamil Nadu.

OBJECTIVES OF THE STUDY

- ◆ To measure and compare the satisfaction level of foreign tourists visiting Mahabalipuram and Kanchipuram;
- ◆ To identify the determinants that contributes to the tourist satisfaction with the help HOLSAT Model.

HYPOTHESES

H_{01} : There is no significant difference between the expectation scores and the actual service rendered scores of the foreign tourists visiting Mahabalipuram.

H_{02} : There is no significant difference between the expectation scores and the actual service rendered scores of the foreign tourists visiting Kanchipuram.

RESEARCH METHODOLOGY

The Study: The present study is empirical in nature and is based on the survey method. The data for the study was collected from primary

source, with the help of a standardized questionnaire. The study aims to investigate the satisfaction level of the tourists from foreign countries visiting Mahabalipuram & Kanchipuram and to identify the variables that contribute to the tourist satisfaction, by employing the HOLSAT methodology. More than 200 questionnaires were distributed to foreign tourists visiting Mahabalipuram and Kanchipuram each, but only 89 & 93 filled in questionnaires were received respectively. The questionnaire schedule includes 25 key variables spanning 5 broad dimensions of the HOLSAT model. The Key variables were identified after a thorough analysis of literature pertaining to the tourist satisfaction, expectation and perceptions were recorded on a 5-point likert's scale. Expectation scores were distributed from '1' very low to '5' very high. The actual service rendered scores were distributed from '1' very dissatisfied to '5' very satisfied.

The Tools for Data Analysis: Statistical tools such as Mean, Standard Deviation were used to ascertain the expectations and perception of the respondents. The Paired t-test was used to test the hypothetical relationship between the variables.

Respondent's Profile: The demographic profile of the respondents is given in Table 1. Mahabalipuram: According to the age, While 12 tourists fell under the group of 21 to 30 years, 34 tourists belong to the group of 31-40 years, 27 belongs to the group of 41 to 50 years & 16 were 51 years & above. The Sample consisted of 47 male & 42 female respondents. The Table also shows the number of visits made by the tourists to the destination. 74 tourists visited for first time, 11 traveled for second time & 4 had earlier made more than 2 visits to the destination. Media & friends were the major motivational factors for the tourists to visit the destination. Majority of tourists comes from Central Asia region to visit the destination.

Kanchipuram City: According to the age, While 21 tourists fell under the group of 21 to 30 years, 39 tourists belong to the group of 31-40 years, 22 belongs to the group of 41 to 50 years & 11 were 51 years & above. The Sample consisted of 52 male & 41 female respondents.

The Table also shows the number of visits made by the tourists to the destination. 54 tourists visited for first time, 23 traveled for second time & 16 had earlier made more than 2 visits to the destination. Media & friends were the major motivational factors for the tourists to visit the destination. Majority of tourists comes from Western region to visit the destination.

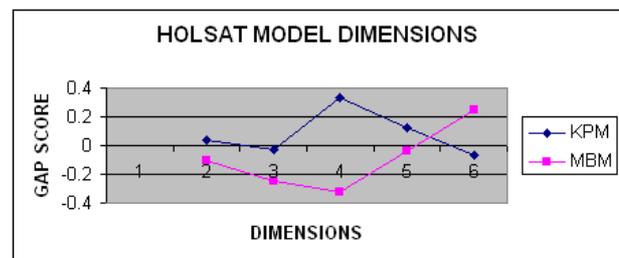


Figure 1: Holsat Model Dimensions

RESULTS AND DISCUSSION

Section I: As per Table 2, In the case of Mahabalipuram tourists, they were satisfied with availability of the shopping facility, communication infrastructure, adequate safety & security facilities in the destination, destination plan and vehicle parking. They were not satisfied with food quality, eating facility, climatic conditions, sufficient access to drinking water and availability of hospital facilities. As per Table 3, in the case of Kanchipuram the tourists were satisfied with food quality, eating facility, quality of accommodation, access to drinking water and safety and security facilities in the destination. They were not satisfied with the availability of tourist guide, vehicle parking, climatic conditions, hospital facilities and cleanliness.

Section II: Satisfaction of Foreign Tourists: Dimensions of the HOLSAT Model

This gives more meaningful insights into the satisfaction level for the foreign tourists visiting Mahabalipuram & Kanchipuram. The 25 attributes identified for the study can be categorized into 5 dimensions of the HOLSAT Model. Table 4 depicts that four out of five dimensions get negative scores and others get positive scores in the case of Mahabalipuram and 2 dimensions have negative scores, others got positive scores in the case of Kanchipuram as per Table 5. In another way, the tourists were satisfied with only the 'amenities', the other dimensions of the model do not appear to

provide satisfaction to the tourists, since their gap scores are negative in the case of Mahabalipuram, whereas, Kanchipuram tourists were satisfied with attraction, access & accommodation of the HOLSAT Model. The other dimensions 'activities' and 'amenities' did not provide satisfaction to tourists since their gap scores are negative.

Hypothesis Testing

For testing the first null hypothesis, the data was analysed using the paired 't' test taking the scores of the expectation and the actual service rendered from foreign tourist visiting Mahabalipuram at 0.05 level of significance. The mean score was (-) 0.0744 thus the first null hypothesis was rejected and there exist a significant difference between the expectation scores and the actual service rendered scores of the foreign tourists visiting Mahabalipuram.

Results of Paired t-test

| Mean | Standard Deviation | t |
|---------|--------------------|---------|
| -0.0744 | 0.2069 | -1.7979 |

The second null hypothesis was tested using the paired 't' test taking the scores of the expectation and the actual service rendered from foreign tourist visiting Kanchipuram at 0.05 level of significance. The mean score was 0.0598 and thus the second null hypothesis was accepted and it can be conclude that there is no significant difference between the expectation scores and the actual service rendered scores of the foreign tourists visiting Kanchipuram.

Results of Paired t-test

| Mean | Standard Deviation | t |
|--------|--------------------|--------|
| 0.0598 | 0.6010 | 0.4975 |

CONCLUSION

The perception of the foreign tourists of Mahabalipuram as a tourist centre has been poorer than their expectations. The reasons included non-availability of well trained tourist guide, non-cooperation of local people, polluted environment, unfavorable climatic conditions, lack of infrastructure and super structure for providing right information to the tourists, lack

of hospital facility, and certain other services. The foreign tourists visiting Kanchipuram generally hold a positive view because of better attractions, accessibility and accommodation. From the study can be concluded that the tourists were generally satisfied with the holiday characteristics of Kanchipuram in comparison to Mahabalipuram. The good experiences reported by the tourists and the significance level of satisfaction of foreign travelers indicate that Kanchipuram has a great potential to offer to tourists.

LIMITATIONS OF THE STUDY

The Major limitation of the study is the usual sample size. The results of the study surely will improve with a larger sample with respect to the research setting, it is to be noted that most of the data was collected at a single point in time. The result may vary for different profile of tourists. The population (foreign tourist) used in this study is a heterogeneous group that presumably has greater than average cognitive capabilities. Hence, there is an obvious need to replicate this study using the sample with common demographic profile to extend generalisability of results. While this study reveals the level of satisfaction of foreign tourists visiting Mahabalipuram & Kanchipuram cities, there are several areas and places which need future research.

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ANNEXURE

Table 1: Respondent's Profile

| Variables | Respondent's Number | | Percentage | | Cumulative % | |
|----------------------------|---------------------|-----|------------|-----|--------------|-----|
| | MBM | KPM | MBM | KPM | MBM | KPM |
| AGE group in yrs | | | | | | |
| 21-30 | 12 | 21 | 14 | 22 | 14 | 22 |
| 31-40 | 34 | 39 | 38 | 42 | 52 | 64 |
| 41-50 | 27 | 22 | 30 | 24 | 82 | 88 |
| 51 & above | 16 | 11 | 18 | 12 | 100 | 100 |
| Total | 89 | 93 | 100 | 100 | | |
| Gender | | | | | | |
| Male | 47 | 52 | 53 | 56 | 53 | 56 |
| Female | 42 | 41 | 47 | 44 | 100 | 100 |
| Total | 89 | 93 | 100 | 100 | | |
| Number of Visits | | | | | | |
| One | 74 | 54 | 83 | 58 | 83 | 58 |
| Two | 11 | 23 | 12 | 25 | 95 | 83 |
| More than 2 | 4 | 16 | 5 | 17 | 100 | 100 |
| Total | 89 | 93 | 100 | 100 | | |
| Motivational Factor | | | | | | |
| Friends | 17 | 23 | 19 | 25 | 19 | 25 |
| Media | 34 | 53 | 38 | 56 | 57 | 81 |
| Past Experience | 12 | 7 | 14 | 8 | 71 | 89 |
| Any other | 26 | 10 | 29 | 11 | 100 | 100 |
| Total | 89 | 93 | 100 | 100 | | |
| Country/Region | | | | | | |
| Western | 14 | 41 | 16 | 44 | 16 | 44 |
| Eastern | 17 | 16 | 19 | 17 | 35 | 61 |
| Central Asia | 37 | 13 | 41 | 14 | 76 | 75 |
| Others | 21 | 23 | 24 | 25 | 100 | 100 |
| Total | 89 | 93 | 100 | 100 | | |

Source: Primary Data MBM- Mahabalipuram, KPM-Kanchipuram

Table 2: Satisfaction of the Mahabalipuram Tourists (According to Gap Score Holsat Model)

| Service Attributes | Experience | | Actual Services Rendered | | GAP Score |
|---|------------|-------|--------------------------|-------|-----------|
| | Mean | SD | Mean | SD | |
| 1.Food quality | 3.42 | 1.253 | 3.220 | 0.985 | -0.200 |
| 2.Eating facility | 3.31 | 1.034 | 2.710 | 1.324 | -0.600 |
| 3.Behaviour of the service provider | 3.22 | 0.957 | 3.200 | 0.901 | -0.020 |
| 4.Availability of food at reasonable price | 3.49 | 0.961 | 3.580 | 1.076 | 0.090 |
| 5. Quality of accommodation at the Destination | 3.14 | 0.943 | 2.880 | 0.873 | -0.260 |
| 6.Adequate washroom facilities | 3.35 | 1.114 | 3.000 | 1.127 | -0.350 |
| 7.Wide choice in the selection of accommodation | 3.41 | 1.305 | 3.780 | 1.002 | 0.370 |
| 8.Quality of local transportation | 2.79 | 0.974 | 2.680 | 0.895 | -0.110 |
| 9.Convenient location of the destination | 3.22 | 0.896 | 2.830 | 0.977 | -0.390 |
| 10.Availability of the Shopping facility | 3.14 | 1.147 | 3.400 | 1.265 | 0.260 |
| 11.Availability of Communication Infrastructure | 3.08 | 1.108 | 3.290 | 1.012 | 0.210 |
| 12.Cleanliness | 3.12 | 1.003 | 2.950 | 0.983 | -0.170 |
| 13.Sufficient Access to drinking water | 3.03 | 0.965 | 2.710 | 0.929 | -0.320 |
| 14.Adequate Safety & Security facilities in the destination | 3.30 | 1.085 | 3.470 | 1.264 | 0.170 |
| 15.Adequate Space for Vehicle Parking | 2.56 | 0.764 | 3.700 | 1.014 | 1.140 |
| 16.Availability of tourist guide | 3.20 | 0.938 | 3.110 | 0.784 | -0.090 |
| 17.Friendliness of the local people | 4.13 | 1.153 | 3.050 | 1.112 | -1.080 |
| 18.Climatic Conditions | 3.06 | 0.845 | 3.280 | 1.214 | 0.220 |
| 19.Uniqueness of the destination | 3.47 | 1.172 | 3.170 | 0.984 | -0.300 |
| 20.Availability of Hospital Facilities | 3.14 | 1.137 | 3.020 | 0.879 | -0.120 |
| 21.Culture,Cultural activities & events | 3.05 | 1.203 | 2.770 | 0.657 | -0.280 |
| 22. Relaxed Atmosphere in the destination | 2.97 | 1.016 | 3.120 | 0.715 | 0.150 |
| 23.Availability of tourist info in local info centers | 3.20 | 1.072 | 3.060 | 0.852 | -0.140 |
| 24. Destination plan (Display of Sign Boards) | 3.02 | 1.012 | 3.270 | 1.076 | 0.250 |
| 25. Courteousness & Helpfulness of the Authorities & Staff in the destination | 3.15 | 1.255 | 2.860 | 0.968 | -0.290 |

Source: Primary Data

Table 3: Satisfaction of the Kanchipuram Tourists (According to Gap Score Holsat Model)

| Service Attributes | Experience | | Actual Services Rendered | | GAP Score |
|---|------------|-------|--------------------------|-------|-----------|
| | Mean | SD | Mean | SD | |
| 1.Food quality | 3.100 | 0.946 | 3.760 | 1.273 | 0.660 |
| 2.Eating facility | 3.700 | 1.037 | 3.200 | 1.003 | -0.500 |
| 3.Behaviour of the service provider | 3.070 | 1.275 | 3.350 | 1.196 | 0.280 |
| 4.Availability of food at reasonable price | 2.650 | 0.846 | 2.930 | 0.783 | 0.280 |
| 5. Quality of accommodation at the Destination | 2.961 | 0.937 | 3.350 | 1.258 | 0.389 |
| 6.Adequate washroom facilities | 3.118 | 1.116 | 3.550 | 0.973 | 0.441 |
| 7.Wide choice in the selection of accommodation | 2.882 | 0.821 | 3.190 | 1.149 | 0.311 |
| 8.Quality of local transportation | 3.204 | 1.339 | 2.419 | 0.682 | -0.785 |
| 9.Convenient location of the destination | 2.920 | 0.746 | 3.387 | 1.110 | 0.467 |
| 10.Availability of the Shopping facility | 3.279 | 1.023 | 3.139 | 0.918 | -0.140 |
| 11.Availability of Communication Infrastructure | 3.032 | 0.998 | 3.311 | 1.064 | 0.279 |
| 12.Cleanliness | 4.053 | 1.115 | 3.258 | 0.770 | -0.795 |
| 13.Sufficient Access to drinking water | 2.397 | 0.687 | 2.978 | 0.938 | 0.581 |
| 14.Adequate Safety & Security facilities in the destination | 3.011 | 0.974 | 3.660 | 1.273 | 0.649 |
| 15.Adequate Space for Vehicle Parking | 3.548 | 1.036 | 2.640 | 0.938 | -0.908 |
| 16.Availability of tourist guide | 3.700 | 1.365 | 2.440 | 0.941 | -1.260 |
| 17.Friendliness of the local people | 3.043 | 1.074 | 3.460 | 1.384 | 0.417 |
| 18.Climatic Conditions | 2.978 | 0.926 | 2.950 | 0.795 | -0.028 |
| 19.Uniqueness of the destination | 2.913 | 0.846 | 3.440 | 0.906 | 0.527 |
| 20.Availability of Hospital Facilities | 3.344 | 0.987 | 2.709 | 0.617 | -0.635 |
| 21.Culture,Cultural activities & events | 3.709 | 1.296 | 3.204 | 0.824 | -0.505 |
| 22. Relaxed Atmosphere in the destination | 2.870 | 0.795 | 3.440 | 1.005 | 0.570 |
| 23.Availability of tourist info in local info centers | 2.838 | 0.872 | 2.505 | 0.755 | -0.333 |
| 24. Destination plan (Display of Sign Boards) | 2.690 | 0.869 | 3.354 | 0.820 | 0.664 |
| 25. Courteousness & Helpfulness of the Authorities & Staff in the destination | 2.820 | 1.187 | 3.688 | 1.036 | 0.868 |

Source: Primary Data

Table 4: Analysis of Mahabalipuram Tourists (Dimensions of HOLSAT Model)

| Dimensions | No. of attributes | Experience | | Actual Service Rendered | | GAP Score |
|---------------|-------------------|------------|-------|-------------------------|-------|-----------|
| | | Mean | SD | Mean | SD | |
| Attractions | 5 | 3.258 | 0.160 | 3.15 | 0.097 | -0.108 |
| Activities | 5 | 3.305 | 0.252 | 3.05 | 0.334 | -0.247 |
| Accessibility | 5 | 3.344 | 0.399 | 3.02 | 0.163 | -0.320 |
| Accommodation | 5 | 3.220 | 0.133 | 3.18 | 0.330 | -0.040 |
| Amenities | 5 | 2.960 | 0.264 | 3.21 | 0.396 | 0.250 |

Table 5: Analysis of Kanchipuram Tourists (Dimensions of HOLSAT Model)

| Dimensions | No. of attributes | Experience | | Actual Service Rendered | | GAP Score |
|---------------|-------------------|------------|--------|-------------------------|-------|-----------|
| | | Mean | SD | Mean | SD | |
| Attractions | 5 | 3.0350 | 0.1770 | 3.0730 | 0.463 | 0.038 |
| Activities | 5 | 3.0990 | 0.3541 | 3.0680 | 0.367 | -0.031 |
| Accessibility | 5 | 3.0350 | 0.3523 | 3.3660 | 0.429 | 0.331 |
| Accommodation | 5 | 3.2090 | 0.4290 | 3.3340 | 0.124 | 0.125 |
| Amenities | 5 | 3.1890 | 0.4617 | 3.1240 | 0.331 | -0.065 |

TPM EFFECTIVENESS: AN OPERATIONAL STUDY

Rajeev K Shukla* and Ajit Upadhyaya**

Making optimum use of the available resources and opportunities as well as acquiring a competitive edge has become the guiding mantra of the globalized business operations. This scenario has necessitated bench marking of operations with global best practices. It can be achieved by adapting a time-tested philosophy, called Total Productive Maintenance (TPM). TPM is a philosophy, which brings results when practiced. It achieves the optimum use of resources and obtains best results. It is more than just a 'tool'. It is a holistic productivity improvement system that drives the entire factory and work force. A dynamic, profit oriented approach for plant and equipment management, Total Productive Maintenance (TPM) combines the principles of preventive and predictive maintenance with management strategies, that increase profitability and return on assets through employees participation. TPM, is a quality focused approach for asset management. In the present study, effectiveness of TPM implementation was analyzed with the case of PepsiCo India Holding Private Ltd. (Frito-Lay Division), Channo Plant. Productivity enhancement, Quality improvement, Cost control, Delivery in time, Safety and morale in operational system were considered as parameters for analyzing effectiveness of TPM implementation. Hypotheses was formulated by considering these parameters of TPM effectiveness. Benchmark values of these parameters provided basis for analysis. Findings of the study highlights on the opportunities to improve effectiveness of TPM implementation by drawing due consideration towards critical dimensions of effectiveness parameters.

INTRODUCTION

The business scenario across the world is going through a process of sea change. Policies, practices and strategies are changing fast to cope with the situation. The Indian market scenario too has followed the global trend with the opening up of its economy and markets following deregulation. Thus, the greatest challenge before the industry is to adapt to the new rules of the market quickly and effectively in order to build up profitability. Making optimum use of the available resources and opportunities as well as acquiring a competitive edge has thus become the guiding mantra of the day. Companies are drawing business strategies to achieve customer delight by ensuring timely delivery of reliable products and services at highly competitive prices. Hence the focus is on supply of quality goods and services at prices which are competitive.

This scenario has necessitated bench marking of operations with global best practices. It can be achieved by adapting a time-tested philosophy, which promises total elimination of all unnecessary costs associated with material, operations, maintenance time and minimization of all type of losses with total involvement of every employee of the organization. TPM is a philosophy, which brings results when practiced. It achieves the optimum use of resources and obtains best results. It is more than just a 'tool'. It is a holistic productivity improvement system that drives the entire factory and work force. A dynamic, profit oriented approach to plant and equipment management, Total Productive Maintenance (TPM) combines the principles of preventive and predictive maintenance with management strategies, that increase profitability and return on assets through employees participation. TPM is a quality focused approach for asset management.

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TPM provides a systematic procedure for linking corporate goals to maintenance goals. This procedure considers external and internal corporate environments, development of a basic maintenance policy, identification of key points for maintenance improvement, and finally the definition of target values for maintenance performance. In the TPM framework, the goals are to develop a "maintenance-free" design and to involve the participation of all employees to improve maintenance productivity. A metric, termed the "overall equipment effectiveness (OEE)," is defined as a function of equipment availability, quality rate, and equipment performance efficiency.

The TPM metrics offer a starting point for developing quantitative variables for relating maintenance measurement and control to corporate strategy. TPM focuses on eliminating major "losses" encountered in production activities. These losses are decomposed into major losses obstructing equipment efficiency, manpower (personnel) efficiency, and efficiency of material and energy. Based on their links to achieving corporate goals, targets to eliminate or reduce these losses are developed directly for the maintenance task in a production system. Just as in activity-based costing (ABC), where cost drivers are identified, the objective here is to identify variables that can demonstrate causal relationships these maintenance activities have on production system performance. Each of the major equipment losses are functionally related to availability, performance efficiency, and/or quality rate. Thus, the improvement from a maintenance system can be measured by its impact on the OEE.

LITERATURE REVIEW

The concept of TPM which aims at maximizing the equipment effectiveness originated from Japan. It made progressive strides in countries like USA, Europe and other South Asian countries after its successful implementation in Japan (Pardue *et al.* 1994). TPM is beginning to make the transition from a repair department to that of high level business function. TPM transcends this conventional approach in transforming the responsibility of a department into a company wide culture of

autonomous maintenance by everyone, aimed at not just preventing the breakdowns, but also at making the machinery live up to its full potential (Majumdar 1998).

In modern day manufacturing and service industries, improved quality of products and services increasingly depend upon the features and conditions of the organization's equipment and facility. The economic environment is becoming increasingly harsh. In order to survive every industry has to strive for improving productivity in all spheres of activities. Hence it is logical to utilize the resources like machinery, men, and material as optimally as possible (Krishnaiah, 1995).

TPM transcends this conventional approach in transforming the responsibility of a department into a company wide culture of autonomous maintenance by everyone, aimed at not just preventing the breakdowns, but also at making the machinery live up to its full potential (Majumdar, 1998).

It would be very difficult to achieve the most cost effective objective if the business is continued to be operated in a very functional way, regarding the condition of machinery and equipment as the sole responsibility of maintenance department. Traditional attitudes across a range of companies are typified by statements like 'it is my job to operate the machine: it is someone else's job to fix it if it goes wrong'. Barriers between production and maintenance personnel shown up by this remark have been matched by barriers between trades themselves. One of the bad results has been a traditional lack of further development training for skilled maintenance craftsmen once their apprenticeship has been completed (Spratling 1987).

TPM is not a mere combination of MP (Maintenance Prevention)-CM (Corrective Maintenance)-PM (Preventive Maintenance) but it emphasizes promoting maintenance through 'autonomous maintenance' by encouraging small group activities (Nakajima 1982). The concept of TPM lays much emphasis in maximizing the equipment effectiveness by eliminating all forms of inefficiencies, hindering

capital, material and labour productivity. The mechanics of achieving such spectacular rise in equipment effectiveness is through the involvement of all employees in the organization belonging to various departments like production, maintenance, technical services and stores. This is possible when all employees channel their energies in a specific direction without adopting a compartmentalized segmented approach. Such changes do not take place at the expense of maintenance jobs. The challenge is to do things together at a higher standard than was previously possible. Schonberger (1986) recorded that, after they had taken over routine lubrication, operators at Harley Davidson found that some machine lubrication points had never been oiled or greased before. And that is not to say that maintenance personnel had previously been negligent.

Skill levels are improved by training and practice in the right way. Constant repetition leads to error-free and consistent performance. Auditing skills periodically helps to ensure that standards do not slip, so operator re-qualification is not demeaning but simply good practice.

Murata and Harrison (1991) propose three levels of quality of work:

(i) **Repair Level:** People carry out instructions, but cannot foresee the future, they simply react to problems.

(ii) **Prevention Level:** People can foresee the future by predicting problems, and take corrective action.

(iii) **Improvement Level:** People can foresee the future by predicting problems. They not only take corrective action but also propose improvements to prevent recurrences. So far, the focus has been limited to the systems and people involvement necessary to develop a reliability-centered maintenance programme with increasingly close integration of production and maintenance personnel. This is the essential foundation for TPM. Unless the basic PM disciplines and operator/maintenance cooperation are in place, it would be fruitless to attempt to introduce a full TPM programme.

TPM is an evolutionary approach to excellence in maintenance, and feeds of many basic people preparation processes such as the housekeeping and safety disciplines. There is also a strong link, and many analogies, between TPM and TQM. As a result, TPM is incapable of independent existence.

Willmott (1993) refers to the fundamental changes in attitude that must take place: If a process is not working well, we will not only fix it, we will determine why it was not working well in the first place and correct those fundamental causes, and if the process is working, can it be improved?

The starting point for changes in attitude must be within the top team. By recognizing the key role of total life cycle cost of ownership in the company, several important decisions flow (Turcotte and Stickler 1990). If everyone can be brought to recognize this key role, and their individual contribution to be well on the way to realizing the need to plan for achieving TPM and for the education which is needed to support it. TPM provides a platform for such horizontal integration of employees to tackle any equipment related problem in a multidisciplinary fashion (Krishnaiah 1995). When employees accept this point of view, they will see the advantage of building quality into equipment and building an environment that prevents equipment and tools from generating production or quality problems. No matter how advanced the technology is people play a key role in maintaining the optimum performance of the equipment. TPM calls for a dramatic change from the traditional 'I make – You fix' attitude that so often divide workers. Through TPM everyone co-operates to maintain equipment the company depends on for survival and ultimately for profitability. At the very heart is the motivation, participation and enhancement of shop floor personnel (Sharma 1995).

OBJECTIVES OF THE STUDY

The major objective of the study was to measure the effectiveness of TPM implementation in the overall manufacturing operations.

HYPOTHESES

Following hypothesis were formulated:

H₁: TPM Implementation significantly improves Productivity of operational system.

H₂: TPM Implementation significantly improves Quality of operational system.

H₃: TPM Implementation significantly improves Cost of operational system.

H₄: TPM Implementation significantly improves Delivery of operational system.

H₅: TPM Implementation significantly improves Safety of operational system.

H₆: TPM Implementation significantly improves Morale of operational system.

METHODOLOGY

The Study: The research study is exploratory in nature. It aims at providing an insight to the philosophy of TPM. Basic pillars and strategies of TPM were studied for understanding the effectiveness of TPM implementation in manufacturing operations.

The Tools for Data Collection: Case study method is used as a data collection tool for the study. The study uses secondary data which were collected from secondary sources, CII publications, News Bulletins of Industries. Case for the study adopted from TPM Club India Bulletin.

The Tools for Data Analysis: Data were analyzed for measuring effectiveness of TPM implementation. Productivity enhancement, Quality improvement, Cost control, Delivery in time, Safety and Morale were used as parameter for the analysis. Effectiveness of TPM implementation were measured for these parameters and compared with their respective Benchmark values with the help of one sample T test.

Case Profile

Company Name : PepsiCo India Holding Private Ltd. (Frito-Lay Division)
 Factory Site : Channo Plant
 Products : Potato Chips and Kurkure
 TPM kick off date : 16 June 2004

Company Profile

The plant started the operation in 1989 (during the days of Punjab insurgency). There was a study growth from 1997 to 1999, before that it was lower capacity utilization. However, since 2000 there has been exponential growth. The average daily production level of 90Ton comprises of lays, uncle chips, kurkure, Frito press& Cheetos mainly catering to north and central India. There are 285 operatives and 47 management staff operating the plant.

RESULTS AND DISCUSSIONS

Productivity of man power and overall equipment effectiveness should increase by implementing TPM. Improvement measures taken will result in reduced breakdown occurrences of manufacturing operations. Productivity implies development of an attitude of mind and a constant urge to find better, cheaper, easier and safer means of doing a job, manufacturing a product and providing a service. It is depicted in Table1 that all sub parameters of productivity performances are following the above mentioned trends. However improvement in manpower productivity in potato chips line and breakdown occurrence in Kurkure production line are not significant at 5 percent level of significance, when it is compared with the respective Bench mark values (Table 2). Thus hypothesis H₁ is partially accepted. Finding reflects that there is a further potential to improve man power productivity and break down occurrence for improving effectiveness of TPM implementation.

Quality is the measure of an organization to provide better acceptable products/services to the customer. TPM implementation offers an organization the means to produce more usable products/services that meets customer approval. In this case number of customer complaints and on line leaky packet percentage must be reduced for improving quality. Table1 depict the trend of quality sub parameters after TPM implementation. There is significant improvement in quality (Table 2). Hence hypothesis H₂ is accepted.

Aggregate total cost of manufacturing operation must be decreased by TPM

implementation. A cost reduction programme means maximization of profits by reducing costs through economics and savings in the cost of manufacture, administration, selling, distribution and use. Table 1 shows the reduction in variable monthly overhead cost of Potato chips and Kurkure plant, reduction in finished product chips wastages, Energy loss and breakdown maintenance cost. Material efficiency of Kurkure plant is higher than benchmark; it indicates improvement in material usage. However, one sub parameters of cost performance, Preventive maintenance cost is not following the desired pattern of improvement. Variation observed in preventive maintenance cost and is higher than benchmark and is not desirable. There is a vast potential for improvement in preventive maintenance cost. It is reflected in Table2 that effectiveness of TPM implementation for reduction in preventive maintenance cost and variable monthly overhead cost of Kurkure plant are not significant. Thus hypothesis H_3 is partially accepted.

Delivery performance is the ability of the supplier to provide the required type and the number of items according to schedule. Aligned dispatch compliance has improved after TPM implementation (Table 1). It resulted in significant improvement of delivery schedule (Table 2). Thus hypothesis H_4 is accepted.

Loss time accident, Medical treatment case and probability of First Aid case must be reduced to minimum by TPM implementation. It was observed that medical treatment cases have been reduced where as loss time accident and First aid cases were not up to the mark (Table 1) and thus an opportunity for improvement exists. Safety and hygiene constitutes the foundation stone of the preventative approach in achieving the goals of industrial health, as it deals with identification, assessment and control of environmental factors harmful to the health of employees. These factors may be physical, chemical or biological agents or ionizing radiation. The scientific approach adopted in applying industrial hygiene include, identifying the extent of toxicity, effects of chemical, physical and biological agents; identifying the extent of employee exposure through inhalation, skin absorption or ingestion; recommending and

implementing process controls that reduces exposure to harmful substances and following safe work practices including use of personal protective equipment to control exposures. Table 2, indicates measures taken for safe operation is insignificant. Safety consideration must get due consideration in manufacturing operations and aim should be zero accident. Thus hypothesis H_5 is partially accepted.

Morale of employees involved in manufacturing operation is one of the best indicators of TPM effectiveness. Morale is used to describe the overall satisfaction of employees working in an organization. Goals of an individual employee should be the same as company goals to improve productivity and working conditions. In this case employees' involvement in operation is reflected by suggestions provided by them for improvement of operation. It is measured by Kaizen in TPM implementation. It should be higher. Table1 indicates significant improvement in number of suggestion provided per employee. Hence hypothesis H_6 is accepted (Table2)

CONCLUSIONS

It is evident from the results and findings of the case study that implementation of TPM can bring in commendable reforms and improvement in terms of Productivity enhancement, Quality improvement, Cost control, meeting promised Delivery dates, Safety, Morale and in providing conducive work place for manufacturing operation. However findings of the study suggest that detailed analysis of manufacturing operation must be carried out for developing safety measures in TPM implementation. Optimization of Preventive maintenance cost is also to be looked in for improving effectiveness. Once effectiveness of TPM implementation is reached at Benchmark and remains constant for an observable period of time than the next level of Benchmark could be set for further improvement in operations. It will provide a base for a continuous search for alternatives in every field of operational activities to improve performance leading to achieve higher level of effectiveness. It must be always kept in mind that there is always a better way of doing a things, when it is applied for measuring

effectiveness of TPM implementation in manufacturing operation.

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Table 1: Values of Key Performance Parameters

| Key Performance Parameters | Sub Parameters | Unit of Measurement | Benchmark 2004 | Actual 2005 | Actual 2006 | Actual 2007 | Actual 2008 | Better |
|----------------------------|---|---------------------|----------------|-------------|-------------|-------------|-------------|--------|
| Productivity | OEE of Process Lines | % | 85 | 89 | 92 | 94 | 95 | ↑ |
| | OEE of Packing Lines | % | 60 | 71 | 76 | 80 | 82 | ↑ |
| | Manpower Productivity in Potato chips Lines | Kg/Man-hr | 22.9 | 25.58 | 27.9 | 25.39 | 24 | ↑ |
| | Breakdown Occurrence in Potato Chips | Nos/Year | 428 | 325 | 251 | 175 | 44 | ↓ |
| | Breakdown Occurrence in Kurkure | Nos/Year | 123 | 105 | 90 | 66 | 17 | ↓ |
| Quality | Customer complaints | Nos/Year | 46 | 28 | 16 | 17 | 2 | ↓ |
| | On line-leaky Packets | % | 1.2 | .93 | .52 | .35 | .3 | ↓ |
| | Variable Monthly Overheads: Potato chips | Rs/Kg | 9.81 | 8.37 | 8.36 | 7.73 | 6.63 | ↓ |
| Cost | Variable Monthly Overheads:Kurkure | Rs/Kg | 1.86 | 1.81 | 1.78 | 1.72 | 1.6 | ↓ |
| | Controllable Finished products waste: Chips | % | 2.3 | 1.59 | 1.43 | 1.17 | .96 | ↓ |
| | Material Efficiency: Kurkure | % | 95.1 | 96 | 96.4 | 96.8 | 97.03 | ↑ |
| | Energy Loss | Rs/Kg | 1.09 | .73 | .8 | .46 | .34 | ↓ |
| | Preventive Maintenance cost | Rs/Kg | .945 | .954 | .89 | 1.03 | 1.03 | ↓ |
| | Breakdown Maintenance cost | Rs/Kg | .085 | .056 | .072 | .04 | .03 | ↓ |
| | Aligned Dispatch Compliance | % | 84 | 88 | 90 | 91 | 94 | ↑ |
| Safety | Loss time Accident | Nos/Year | 1 | 1 | 3 | 0 | 0 | ↓ |
| | Medical Treatment case | Nos/Year | 12 | 9 | 6 | 3 | 0 | ↓ |
| | First Aid case | Nos/Year | 6 | 16 | 14 | 8 | 4 | ↓ |
| Morale | One point Lesson | Nos/Person/Year | .75 | 1.4 | 2.2 | 3.3 | 3.2 | ↑ |
| | Kaizen | Nos/Person/Year | .8 | 1.5 | 2 | 2.8 | 3.4 | ↑ |

Table 2: One Sample T- Test

| Key Performance Parameters | Sub Parameters | Unit of Measurement | Benchmark 2004 | Mean | SD | T Value | df | Sig. (2 tailed) |
|----------------------------|---|---------------------|----------------|-------|--------|---------|----|-----------------|
| Productivity | OEE of Process Lines | % | 85 | 91 | 4.06 | 3.303 | 4 | 0.030 |
| | OEE of Packing Lines | % | 60 | 73.8 | 8.78 | 3.512 | 4 | 0.025 |
| | Manpower Productivity in Potato chips Lines | Kg/Man-hr | 22.9 | 25.15 | 1.88 | 2.676 | 4 | 0.055 |
| | Breakdown Occurrence in Potato Chips | Nos/Year | 428 | 244.6 | 145.96 | -2.810 | 4 | 0.048 |
| | Breakdown Occurrence in Kurkure | Nos/Year | 123 | 80.2 | 41.04 | -2.33 | 4 | 0.080 |
| Quality | Customer complaints | Nos/Year | 46 | 21.8 | 16.37 | -3.304 | 4 | 0.030 |
| | On line-leaky Packets | % | 1.2 | .66 | .39 | -3.093 | 4 | 0.036 |
| Cost | Variable Monthly Overheads: Potato chips | Rs/Kg | 9.81 | 8.18 | 1.15 | -3.157 | 4 | 0.034 |
| | Variable Monthly Overheads: Kurkure | Rs/Kg | 1.86 | 1.75 | .099 | -2.373 | 4 | 0.077 |
| | Controllable Finished products waste: Chips | % | 2.3 | 1.49 | .513 | -3.53 | 4 | 0.024 |
| | Material Efficiency: Kurkure | % | 95.1 | 96.26 | .761 | 3.426 | 4 | 0.027 |
| | Energy Loss | Rs/Kg | 1.09 | .684 | .295 | -3.074 | 4 | 0.037 |
| | Preventive Maintenance cost | Rs/Kg | .945 | .969 | .06 | .736 | 4 | 0.503 |
| | Breakdown Maintenance cost | Rs/Kg | .085 | .052 | .017 | -2.236 | 4 | .089 |
| Delivery | Aligned Dispatch Compliance | % | 84 | 89.4 | 3.71 | 3.25 | 4 | 0.031 |
| Safety | Loss time Accident | Nos/Year | 1 | 1 | 1.22 | 0.00 | 4 | 1 |
| | Medical Treatment case | Nos/Year | 12 | 6 | 4.74 | -2.828 | 4 | 0.047 |
| | First Aid case | Nos/Year | 6 | 9.6 | 5.17 | 1.55 | 4 | 0.195 |
| Morale | One point Lesson | Nos/Person/Year | .75 | 2.17 | 1.12 | 2.855 | 4 | 0.046 |
| | Kaizen | Nos/Person/Year | .8 | 2.10 | 1.029 | 2.823 | 4 | 0.048 |

EFFECTIVENESS OF ACTIVITY BASED LEARNING IN MANAGEMENT EDUCATION: A STUDY OF MANAGEMENT INSTITUTES IN GURGAON DISTRICT

Neelam Jain* and Vijay Rathee**

Recent examination of practice and literature indicates a growing sophistication in the way that work-based learning/ activity based learning (ABL) is being theorised and facilitated in higher education, with its gradual emergence as a distinct field of practice and study supported by relevant pedagogies and concepts of curriculum. However, universities are beginning to engage with these issues at a deeper level than that suggested by simple notions of employer engagement and skills development, and the evidence indicates that well-designed work-based programmes are both effective and robust. The present study is undertaken to identify the impact of two important ABL methods namely, case study and group discussion on the students and faculty members of management institutes.

INTRODUCTION

Since the 1980s there has been significant growth in the engagement of higher education with workforce development, along with the emergence of a distinct if varied area of provision commonly referred to as work-based learning/ Activity based learning (ABL). The philosophy of ABL finds its antecedents in the common notion that learning can be best when it is initiated by the surrounding environment and motivated by providing optimum opportunities to learn. A fearless and freedom to express environment always adds to best learning outcomes.

The ABL approach is unique and effective to attract out-of-college students to college. The teachers who are involved in implementing this method have developed activities for each learning unit which facilitated readiness for learning, instruction, reinforcement and evaluation. ABL has transformed the classrooms into hubs of activities and meaningful learning. The key feature of the ABL method is that it uses student-friendly educational aids to foster self-learning and allows a student to study according to his/her aptitude and skill.

ABL IN MANAGEMENT EDUCATION

The development of negotiated work-based learning in management education is part of an

evolution from models concerned on the one hand with setting up and accrediting in-company courses and on the other with using the workplace as a vehicle for subject-specific learning (both legitimate practices in their own right), to the conception of an individual work-based 'curriculum' that grows out of the experience of the learner, their work context and their community of practice (Boud 2001). From this has emerged the idea of work-based learning as a transdisciplinary field that sits outside of subject-frameworks and has its own set of norms and practices (Costley & Armsby 2007a). This approach is particularly championed at Middlesex through a substantial institute alongside the main faculty structure, and it is also evident in the practices of some other leading providers of work-based higher education in the UK and Australia.

The last two or three decades have seen an expansion of universities' involvement in the development of the existing workforce through means such as part-time in-service courses and bespoke programmes for employers. In the United Kingdom, as in many other advanced economies, there is an emerging consensus that the number of people in the workforce with higher-level skills – those broadly associated with higher education – needs to be increased substantially (e.g. Leitch 2006), and that this

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cannot be achieved by growth in the number of full-time students alone. As a result universities are being exhorted to increase their involvement in workforce development and look beyond traditional school-leaver and early-career markets to engagement with a wider range of adult learners and their employers.

Research into learning at work such as that of Gear *et al.* (1994), Eraut & Hirsh (2007) suggests that the most effective and valuable learning for people in work is often that which occurs through the medium of work or is prompted in response to specific workplace issues, as opposed to formal training or off-job programmes. While this kind of learning can be purely instrumental, it can also be highly developmental particularly when it is linked to a personally-valued purpose and engaged with critically and reflectively. Responding to this there is an ongoing trend within some universities to move into the "territory" of the workplace (Scott *et al.*, 2004) to enhance and accredit genuinely work-based, often individually-driven learning, as opposed to relying on extending more established approaches to education and training into work-based settings.

ABL refers to training methods that require the trainee to be actively involved in learning. It includes the methods like on the job training, simulations, case studies, business games, role plays and behavioral modeling. Case study method is the acknowledged approach to the teaching of management. Management is an applied discipline. Experience is a great teacher. It gives the lesson first and the learning later. Theory often fails to drive home and does not get internalized. The case method simulates the real life situation and places the student in the position of the business manager required to make a set of decisions. With the case method, the process of arriving at an answer is more important than the answer itself. In the process the student learns the process of decision making. The student also learns to support the decisions with appropriate analysis and communicate ideas both orally and in writing.

The method of teaching thus shifts much of the responsibility to the student. The

methodology shifts from Instructor Led Teaching (ILT) to a Student Pull Learning (SPL). Studying through the case method results in development of skills in critical thinking, reasoning and communication. When the viewpoint is challenged and conflicting views surface, the student develops a greater awareness of the complexities of managerial decision making. While classroom group discussion teaching model in higher education is widely used abroad, Indian colleges and universities have also tried this new teaching model. However, in this mode of teaching, effectiveness of teaching has always been controversial.

OBJECTIVES

- ◆ To identify factors that affect 'Case Study' and 'Group Discussion' methods that contribute towards effective students' learning in management education.
- ◆ To identify factors that affect 'Case Study' and 'Group Discussion' methods that contribute towards the teaching effectiveness of faculty members.

METHODOLOGY

The Study: The study is exploratory in nature and undertaken to identify the factors that affect selected ABL methods towards effective teaching and learning in management institutions of Gurgaon district.

The Sample: The sample of the study was collected from the population of all the students and faculty members who could have been contacted on the scheduled days, or those who were willing to respond to the questionnaire. Total 100 students and 25 faculty members of management institutions were finally considered for the sample. The Institutions considered for study were: Institute of Law and Management Studies, Gurgaon Institute of Technology and Management, Institute of Technology and Management and Management Development Institute.

The Tools for Data Collection: Primary data of the study were collected from two standard questionnaires one for students and another for faculty members. The attributes of questionnaire were measured on a 7-Point Likert scale of

importance with 1 being extremely unimportant and 7 being extremely important. Secondary data were collected from various books, publications, journals and different websites.

The Tools for Data Analysis: Factor analysis was used in this research to summarize the variables by examining correlations between the variables, and to create an entire new set of variables to replace original variables. Factors were derived using principal component method, which summarizes the original information into factors for prediction. Only those factors having Eigen values greater than 1 were included. Factors were rotated using the varimax rotation method. According to Hair et al., (1998) factor loadings at +/- .30 are considered minimal, +/- .40 more important, +/- .50 or greater practically significant. Items with loading greater than or equal to +/- .50 were retained.

RESULTS AND DISCUSSIONS

The below mentioned variables were considered for the Objective 1 of the study.

- A1: Improved Team Work
- A2: Leadership Qualities
- A3: Improved communication skills
- A4: Removed Hesitation
- A5: Increased Reasoning
- A6: Developing Managerial skills
- A7: Participation in the class
- A8: Easy understanding of concepts
- A9: Improved decision making
- A10: Reduced absenteeism of students

The result of factor analysis conducted on students data are given in table 1, table 2, table 3, table 4 and table 5. From the table 3 it can be easily seen that only five (5) factors are to be considered for students, that has Eigen value higher than one (1). As a factor with low Eigen value adds little to the explanation of the variance in the variables. Once the relevant factors have been attained they are rotated through varimax rotation method. Varimax rotation is one such method that maximizes the variance of the loadings within each factor.

Factor 1 includes leadership qualities, improved communication skills and developing

managerial skills of the students. The values of the factor shows negative sign for leadership qualities and developing managerial skills in students, that means the two are not important. The case study and group discussions are not much contributing for these two aspects of the students but if we look at the improved communication skills it is something that is the need of the hour and is straight away contributed by case study and group discussions if they are the part of delivering concepts. Factor 2 consists of reduced absenteeism of students, again with negative sign and hence showing that it doesn't contribute towards increased attendance of the students. Similarly Factor 3 includes Participation in class and Easy understanding of concepts both with positive signs, denoting that Concepts could be understood by students in much easier manner with the implementation of case study and group discussion compared to theoretical lectures. Factor 4 includes removed hesitation with favoring sign. Factor 5 consists of improved team work and increased reasoning again with favoring sign and hence represents the case study and group discussion contributes positively for these two aspects also. The table 6 is showing factor ranking to identify the importance of different factors.

The below mentioned variables were considered for the Objective 2 of the stud.

- B1: Convenience of teaching.
- B2: Better knowledge to students.
- B3: Improved motivation of students
- B4: Confidence of faculty
- B5: Clarity of conceptual knowledge.
- B6: Proper implementation of concepts.
- B7: Students interest in topic.

The result of factor analysis conducted on faculty members' data are given in table 7, table 8, table 9, table 10 and table 11. From the table 9 it can be easily seen that only four (4) factors are to be considered for faculty members, that has Eigen value higher than one (1). As a factor with low Eigen value adds little to the explanation of the variance in the variables. Once the relevant factors have been attained they are rotated through varimax rotation method. Varimax

rotation is one such method that maximizes the variance of the loadings within each factor.

Factor 1 includes confidence of faculty and students interest in topic which has confidence of faculty with negative sign hence showing that it doesn't contribute towards confidence building for faculty members as it is considered that that already have enough to deliver the concept and face students' queries but is positively contributing in the enhancement of students' interest in topic. Factor 2 includes convenience of teaching and proper implementation of concepts both with positive sign, referring towards the contribution of case study and group discussions. Factor 3 includes better knowledge to students with positive sign. And Factor 4 includes improved motivation of students and clarity of conceptual knowledge both with negative sign. The table 12 is showing factor ranking to identify the importance of different factors.

CONCLUSION

There is absolutely no doubt that the students are truly engaged in the act of learning, though there could be degrees of difference among them. During the several hours of observation, one rarely came across a student who was not pursuing an academic task or a related task. There is eagerness and a sense of purpose in the minds of students. One is left in no doubt that a feeling of mastery is the best reinforcement for the development of competence. It seems to work far better than the traditional methods of taking non-stop lectures. Once the ABL system has been mastered by the faculty members and the students, the burden on the faculty is reduced. Even though the faculty needs a period of un-

learning and re-learning, when moving from the conventional system to the ABL, the end result is very satisfying. He is justifiably proud of his mastering the administration of the new system and of the student's achievements.

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Table 1: Correlation between Variables (A1 to A10)

| _ | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 |
|-----|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|
| A1 | 1 | 0.152 | -0.078 | -0.051 | 0.135 | 0.143 | 0.01 | 0.026 | -0.092 | -0.118 |
| A2 | 0.152 | 1 | -0.234 | -0.123 | 0.139 | 0.239 | -0.125 | -0.028 | -0.163 | -0.147 |
| A3 | -0.078 | -0.234 | 1 | 0.062 | -0.007 | -0.271 | 0.16 | 0.03 | 0.002 | -0.264 |
| A4 | -0.051 | -0.123 | 0.062 | 1 | 0.091 | -0.0518 | -0.029 | 0.089 | 0.204 | 0.007 |
| A5 | 0.135 | 0.139 | -0.007 | 0.091 | 1 | 0.074 | -0.042 | -0.106 | -0.118 | -0.158 |
| A6 | 0.143 | 0.239 | -0.271 | -0.051 | 0.0741 | 1 | -0.269 | -0.012 | -0.197 | 0.097 |
| A7 | 0.01 | -0.125 | 0.16 | -0.029 | -0.042 | -0.269 | 1 | 0.253 | 0.104 | 0.192 |
| A8 | 0.026 | -0.028 | 0.03 | 0.089 | -0.106 | -0.012 | 0.253 | 1 | 0.187 | -0.032 |
| A9 | -0.092 | -0.163 | 0.002 | 0.204 | -0.118 | -0.197 | 0.104 | 0.187 | 1 | -0.152 |
| A10 | -0.118 | -0.147 | -0.264 | 0.007 | -0.158 | 0.097 | 0.192 | -0.032 | -0.152 | 1 |

Source: Students Survey

Table 2: Principal Components

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 | Factor 9 | Factor 10 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| A1 | -0.334 | 0.273 | 0.411 | -0.357 | 0.151 | -0.322 | 0.605 | -0.125 | 0.038 | -0.087 |
| A2 | -0.597 | 0.177 | 0.287 | -0.126 | -0.210 | 0.380 | -0.281 | -0.448 | -0.133 | -0.167 |
| A3 | 0.496 | 0.452 | -0.344 | -0.291 | 0.029 | -0.365 | -0.239 | -0.090 | -0.272 | -0.270 |
| A4 | 0.268 | 0.183 | 0.211 | 0.613 | 0.511 | -0.159 | -0.083 | -0.412 | 0.005 | 0.110 |
| A5 | -0.295 | 0.488 | 0.024 | -0.049 | 0.623 | 0.321 | -0.127 | 0.389 | 0.049 | -0.107 |
| A6 | -0.653 | -0.169 | 0.228 | 0.186 | 0.007 | -0.394 | -0.209 | 0.246 | -0.434 | 0.105 |
| A7 | 0.507 | -0.217 | 0.292 | -0.561 | 0.269 | 0.230 | -0.033 | -0.060 | -0.301 | 0.276 |
| A8 | 0.336 | -0.043 | 0.718 | -0.119 | -0.125 | -0.217 | -0.395 | 0.159 | 0.318 | -0.100 |
| A9 | 0.504 | 0.146 | 0.375 | 0.431 | -0.255 | 0.271 | 0.300 | 0.193 | -0.310 | -0.190 |
| A10 | -0.009 | -0.845 | -0.024 | -0.006 | 0.382 | 0.009 | 0.040 | -0.055 | -0.038 | -0.365 |

Source: Students survey

Table 3: Eigen Values & Variance

| | | |
|------------|-------|--------|
| Factors 1 | 1.924 | 19.236 |
| Factors 2 | 1.394 | 13.940 |
| Factors 3 | 1.210 | 12.101 |
| Factors 4 | 1.156 | 11.557 |
| Factors 5 | 1.016 | 10.157 |
| Factors 6 | 0.838 | 8.380 |
| Factors 7 | 0.818 | 8.179 |
| Factors 8 | 0.675 | 6.749 |
| Factors 9 | 0.572 | 5.722 |
| Factors 10 | 0.398 | 3.979 |

Source: Students survey

Table 4: Factor Matrix

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-----|----------|----------|----------|----------|----------|
| A1 | -0.334 | 0.273 | 0.411 | -0.357 | 0.151 |
| A2 | -0.597 | 0.177 | 0.287 | -0.126 | -0.210 |
| A3 | 0.496 | 0.452 | -0.344 | -0.291 | 0.029 |
| A4 | 0.268 | 0.183 | 0.211 | 0.613 | 0.511 |
| A5 | -0.295 | 0.488 | 0.024 | -0.049 | 0.623 |
| A6 | -0.653 | -0.169 | 0.228 | 0.186 | 0.007 |
| A7 | 0.507 | -0.217 | 0.292 | -0.561 | 0.269 |
| A8 | 0.336 | -0.043 | 0.718 | -0.119 | -0.125 |
| A9 | 0.504 | 0.146 | 0.375 | 0.431 | -0.255 |
| A10 | -0.009 | -0.845 | -0.024 | -0.006 | 0.382 |

Source: Students survey

Table 5: Rotated Factor Matrix

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| A1 | -0.194 | 0.130 | 0.269 | -0.180 | 0.589 |
| A2 | -0.509 | 0.307 | 0.055 | -0.297 | 0.293 |
| A3 | 0.767 | 0.232 | -0.055 | -0.043 | 0.085 |
| A4 | 0.024 | -0.040 | 0.037 | 0.878 | 0.108 |
| A5 | 0.023 | 0.062 | -0.216 | 0.261 | 0.772 |
| A6 | -0.710 | -0.038 | -0.108 | -0.042 | 0.151 |
| A7 | 0.442 | -0.443 | 0.584 | -0.132 | 0.162 |
| A8 | -0.035 | 0.037 | 0.806 | 0.083 | -0.031 |
| A9 | 0.074 | 0.319 | 0.438 | 0.469 | -0.385 |
| A10 | -0.188 | -0.895 | -0.013 | 0.018 | -0.154 |

Source: Students survey

Table 6: Factor Ranking

| | Overall mean | Ranking on the basis of mean |
|-----------------|---------------------|-------------------------------------|
| Factor 1 | 3.480 | 5 |
| A2 | 3.980 | |
| A3 | 3.323 | |
| A6 | 3.137 | |
| Factor 2 | 4.290 | 2 |
| A10 | 4.290 | |
| Factor 3 | 3.795 | |
| A7 | 3.698 | |
| A8 | 3.899 | |
| Factor 4 | 3.629 | |
| A4 | 3.629 | |
| Factor 5 | 4.370 | 1 |
| A1 | 4.931 | |
| A5 | 3.810 | |

Source: Students survey

Table 7: Correlation between Variables (B1 to B7)

| | B1 | B2 | B3 | B4 | B5 | B6 | B7 |
|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| B1 | 1 | -0.07692 | -0.08731 | 0.100935 | 0.038661 | 0.280123 | -0.17347 |
| B2 | -0.07692 | 1 | -0.03024 | 0.170055 | 0.076506 | -0.06279 | 0.230155 |
| B3 | -0.08731 | -0.03024 | 1 | -0.05182 | 0.217162 | -0.09742 | 0.111595 |
| B4 | 0.100935 | 0.170055 | -0.05182 | 1 | -0.02997 | 0.163605 | -0.39025 |
| B5 | 0.038661 | 0.076506 | 0.217162 | -0.02997 | 1 | 0.106998 | 0.182719 |
| B6 | 0.280123 | -0.06279 | -0.09742 | 0.163605 | 0.106998 | 1 | -0.11922 |
| B7 | -0.17347 | 0.230155 | 0.111595 | -0.39025 | 0.182719 | -0.11922 | 1 |

Source: Faculty survey

Table 8: Principal Components (Faculty)

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| B1 | -0.53079 | 0.381599 | -0.25506 | 0.281813 | -0.64409 | -0.09882 | 0.059583 |
| B2 | 0.215668 | 0.223376 | 0.844502 | 0.22991 | -0.20175 | 0.094681 | -0.29645 |
| B3 | 0.368543 | 0.367436 | -0.16098 | -0.69644 | -0.25583 | 0.387109 | -0.054 |
| B4 | -0.59694 | 0.126481 | 0.575483 | -0.36708 | 0.06019 | -0.01147 | 0.397474 |
| B5 | 0.250557 | 0.775848 | -0.04705 | -0.12518 | 0.23153 | -0.51178 | -0.04332 |
| B6 | -0.51091 | 0.514997 | -0.1458 | 0.287278 | 0.396995 | 0.451902 | -0.09024 |
| B7 | 0.745856 | 0.218788 | 0.030353 | 0.423249 | -0.03129 | 0.183313 | 0.42566 |

Source: Faculty survey

Table 9: Eigen Values and Variance (Faculty)

| | Eigen Values | Variance |
|-----------|---------------------|-----------------|
| Factors 1 | 1.700521 | 24.29316 |
| Factors 2 | 1.261552 | 18.02218 |
| Factors 3 | 1.159727 | 16.56753 |
| Factors 4 | 1.029396 | 14.70566 |
| Factors 5 | 0.736814 | 10.52591 |
| Factors 6 | 0.668451 | 9.549294 |
| Factors 7 | 0.443539 | 6.336267 |

Source: Faculty survey

Table 10: Factor Matrix (Faculty)

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|----|-----------------|-----------------|-----------------|-----------------|
| B1 | -0.53079 | 0.381599 | -0.25506 | 0.281813 |
| B2 | 0.215668 | 0.223376 | 0.844502 | 0.22991 |
| B3 | 0.368543 | 0.367436 | -0.16098 | -0.69644 |
| B4 | -0.59694 | 0.126481 | 0.575483 | -0.36708 |
| B5 | 0.250557 | 0.775848 | -0.04705 | -0.12518 |
| B6 | -0.51091 | 0.514997 | -0.1458 | 0.287278 |
| B7 | 0.745856 | 0.218788 | 0.030353 | 0.423249 |

Source: Faculty survey

Table 11: Rotated Factor Matrix (Faculty)

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|----|-----------------|-----------------|-----------------|-----------------|
| B1 | -0.082 | 0.739 | -0.122 | 0.051 |
| B2 | -0.021 | -0.093 | 0.923 | 0.008 |
| B3 | -0.054 | -0.260 | -0.165 | -0.826 |
| B4 | -0.850 | 0.115 | 0.318 | -0.031 |
| B5 | 0.184 | 0.294 | 0.213 | -0.718 |
| B6 | -0.096 | 0.786 | 0.021 | -0.033 |
| B7 | 0.781 | -0.113 | 0.368 | -0.156 |

Source: Faculty survey

Table 12: Factor Ranking (Faculty)

| | Overall mean | Ranking on the basis of mean |
|-----------------|---------------------|-------------------------------------|
| Factor 1 | 4.52 | 2 |
| B4 | 4.08 | |
| B7 | 4.96 | |
| Factor 2 | 4.91 | 1 |
| B1 | 5.28 | |
| B6 | 4.54 | |
| Factor 3 | 2.76 | 4 |
| B2 | 2.76 | |
| Factor 4 | 3.94 | 3 |
| B3 | 3.76 | |
| B5 | 4.12 | |

Source: Faculty survey

EFFICIENCY OF PRIVATE SECTOR LIFE INSURANCE COMPANIES IN INDIA - AN APPLICATION OF DATA ENVELOPMENT ANALYSIS

Rachana Tejani*

In the year 2011, there were 24 general insurance companies and 23 life insurance companies operating in India. The insurance sector was growing swiftly at a rate of 15-20 percent. Data envelopment analysis (DEA) technique provides an excellent way of analyzing the efficiency of insurance industry. This paper describes the life insurance industry in India followed with the meaning and utility of data envelopment analysis. It analyses the efficiency of the selected private sector life insurance companies in India followed with the discussion of analysis and conclusion drawn on the basis of the same. Fourteen private sector life insurance companies are analyzed over a period of 5 years ranging 2005-2010. Further, Mann-Whitney U test is used to examine the effect of size, market share and integration with bank network on the efficiency of the insurance companies.

INTRODUCTION

In India, Life Insurance sector was opened up for private life insurance companies in the year 2000. Though the sector was opened up for private players but the upper cap for foreign investment in any life insurance company was kept at 26 percent. Hence, foreign players were required to form joint venture to enter Indian Life Insurance market. Life insurance penetration in India was just 4 percent. The reducing market share of Life Insurance Corporation of India indicated that the competition was going to increase amongst private players. Only 8 life insurance companies were profit able after tax in the financial year 2009-10. Hence it is not possible to decide efficiency of life insurance companies on the basis of their PAT. Efficiency needed to be determined for these companies so that regulatory body could frame policies to decide on future direction of life insurance industry. Managers are also required to know about the industry best practices to compete in the market. The current study has measured the efficiency of 14 private sector life insurance companies in India over a period of five year from 2005 to 2010. The objective was to identify efficient insurance company and consider the efficient company as a benchmark to define strategy for other companies to be efficient. This study tries to establish reference

for the industry to study and plan competitive strategy.

LIFE INSURANCE INDUSTRY IN INDIA

The history of the Indian insurance sector dates back to 1818, when the Oriental Life Insurance Company was formed in Kolkata. A new era began in the Indian insurance sector, with the passing of the Life Insurance Act of 1912. The Indian Insurance Companies Act was passed in 1928. The formation of the Malhotra Committee in 1993 initiated reforms in the Indian insurance sector. Second round of reforms in the Insurance sector were initiated with the passing of the IRDA Bill in Parliament in December 1999. The IRDA since its incorporation as a statutory body in April 2000 has fastidiously stuck to its schedule of framing regulations and registering the private sector insurance companies. Since being set up as an independent statutory body, the IRDA has put in a framework of globally compatible regulations.

As Indians grow richer and save more for retirement, the share of the Indian life insurance industry has increased in world markets. India's ranking among life insurance markets has risen from number 10 last year to 9th position, displacing Taiwan. When life insurance industry was opened for competition in 2000, India ranked

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number 20 among life insurance markets and accounted for a mere 0.5 percent of the world premium. Ten years on, the share had improved to 2.45 percent, overtaking developed markets such as Spain, Netherlands, Switzerland, Sweden, Belgium, Ireland, Finland, South Africa, Australia and Canada.

India has grown at 25 per cent CAGR since the market opened up for private players in 2000. This impressive growth in the market has been driven by fundamental factors like liberalization, global economic boom, young population, growing middle class, rising income levels and customer awareness. The measure of insurance penetration (percentage of insurance premium to GDP) and density (the ratio of premium to population - per capita premium) reflects the level of development of insurance sector in a country. Since opening up of Indian insurance sector for private participation, India has reported increase in both of them. But, the increase has been almost entirely contributed by the life insurance sector. An interesting aspect of the life insurance business in India is that it has grown significantly faster than the gross domestic product. The level of insurance penetration in India at 4.6 percent is double the insurance penetration levels in China 2.3 percent. The report shows that adjusted for inflation, India's life insurance industry grew 10 percent to Rs 2,73,604 crore. When it comes to non-life insurance, where premium is paid purely for protection (health, auto and property), India ranks 26th and its share of world insurance market is 0.46 percent.

MEANING AND UTILITY OF DEA

Data Envelopment Analysis (DEA) is a multi-factor productivity analysis model for measuring the relative efficiencies of a homogenous set of decision making units (DMUs). It is a non-parametric approach developed by Charnes et al., (1978) and further extended by Banker et al (1984). The method constructs a frontier based on actual data. Firms on the frontier are efficient, while firms off the efficiency frontier are inefficient. Efficiency is measured as the ratio of weighted outputs (virtual output) to weighted inputs (virtual input) and considers the values between zero and one. An efficient firm does not

necessarily produce the maximum level of output given the set of inputs. Further, efficiency means that the firm is a "best practice" firm in the taken sample. The DEA model has certain specific advantages such as, it is a methodology directed to frontier rather than central tendencies. This model is able to identify any apparent slack in input used or output produced and provides insight on possibilities for increasing output and/or conserving input in order for an inefficient decision-making unit to become efficient. And it also takes care of uncovering relationships, which remain hidden for other methodologies, and allows to rank decision-making units (DMUs) according to their technical efficiency scores and to single out the driving forces for inefficiencies. Varadi et al (2006).

"Efficiency" is defined as Technical Efficiency (TE) in this study, which is the product of Pure Technical Efficiency (PTE) and Scale Efficiency (SE). Pure Technical Efficiency reflects the efficiency of the resource allocation and the management. Scale efficiency indicates the effect of scale: small companies may not assemble the production or obtain the synergy, while many big companies often move slowly and do not show the harmony. Consequently, the scale can also affect the efficiency of a DMU.

The DEA index can be calculated in several ways. In this study, the researcher has estimated an input oriented, technical efficient (TE) DEA index, assuming insurer aim to achieve higher output by using fewer inputs. The overall efficiencies of insurers are obtained when the constant-returns-to-scale assumption is made. That is, when it is assumed that the performance of an insurer continues to increase as long as the insurer continues to increase inputs. The variable return to scale (VRS) dissects technical efficiency into two different components: pure technical efficiency and scale efficiency. Scale efficiency of a firm can be computed by taking ratio of the firm's overall efficiency to its pure technical efficiency. Throughout the study the researcher has considered awareness of DEA model on part of the reader and has not gone into the depth of explaining DEA model in the current study.

LITERATURE REVIEW

Fukuyama (1997) investigated productive efficiency and productivity performances of 25 Japanese life insurance companies from 1988-93 and concluded that both differ from time to time across the two ownership types – mutual and stock under different economic conditions of expansion and recession. Mahlberg and Url (1998), studied Austrian insurance companies during 1992-1996 by means of DEA. The results indicate higher efficiency scores for the variable returns to scale (VRS) case compared to the assumption of constant returns to scale (CRS). This outcome is mainly due to the large number of fully efficient firms under VRS. Under VRS the average efficiency score is about 75 percentage points, indicating that the average firm has a potential for cost cutting of around 25 percentage points. Under CRS the potential for efficiency gains is even larger and fluctuates between 44 and 60 percentage points.

Chen and Wong (2004) studied the solvency of general and life insurance companies in Asia during 1994-1999. The factors that significantly affect life insurers' financial health are firm size, change in asset mix, investment performance, and change in product mix, but the last three factors were more applicable to Japan. Also, the financial health of insurance companies in Singapore seemed to be significantly weakened by the Asian Financial Crisis. As the insurance industry in different Asian economies was at different stages of development, they required different regulatory guidelines. Barros et al. (2005) estimates changed in total productivity, breaking this down into technically efficient change and technological change by means of DEA applied to a sample of insurance companies operating in the Portuguese market for the period 1995-2001. The paper seeks out those best practices that would lead to improved performance in the market. The companies were then ranked according to their change in total productivity, concluding that some companies experienced productivity growth while others experienced reduction.

Tone and Sahoo (2005) examined the performance of LIC using DEA from 1982-83 to 2000-2001 using agent's commission, labour cost,

debt and equity capital as input variables and losses as the claims settled including claims written back and the ratio of liquid assets to liabilities as the output variables. Results suggested a significant variability in overall and scale efficiencies over the 19 year study period. More importantly, there had been a downward trend in performance, measured in terms of cost efficiency, since 1994–1995. This decline was due to the huge initial fixed cost of modernizing their operations. A significant increase in cost efficiency in 2000–2001 suggested that LIC may be beginning to benefit from such modernization, which will stand them in good stead in terms of future competition. Hwang and Kao (2006) adopted two stage DEA to measure the performance of 24 Non-Life insurance companies in Taiwan. The study measured the marketability in first stage and profitability in the second stage. The results show that each non-life insurance company performs differently at different production stages.

Barros and Obijiaku (2007) evaluated the performance of Nigerian insurance companies, using DEA from 2001 to 2005, combining operational and financial variables. The study revealed that bank network-managed insurance companies are found to have higher efficiency scores than those that are not managed within a bank network. Large insurance companies and companies with higher market share tend to be more efficient than their counterparts. Huang (2007) evaluated the efficiency of China's insurance industry for period 1999-2004 using stochastic frontier analysis. The results show that for cost efficiency, life insurance industry, non-state-owned companies and foreign companies are superior to the property insurance industry, state owned companies and domestic companies respectively. But for the profit efficiency, while the life insurance industry still surpasses the property insurance industry, the state-owned companies and domestic companies are better than their counterparts.

Eling and Luhnen (2008) had conducted study on efficiency of insurance industry during 2002-2006 by cross country comparison adopting DEA. Study including 3,555 insurance companies from 34 countries revealed Denmark and Japan had most efficient insurance companies, whereas

Philippines had the lowest efficiency. It had been found that there is positive relationship between capitalization and efficiency. This study provided international growth advantage to a firm which was relatively efficient in efficient market. Zanghieri (2009) estimated cost and profit frontiers, using a sample of European insurance companies for 1997-2006. The characteristics of the national markets were found to play a significant role in explaining cost and profit efficiency. In particular, a better quality of regulation tends to reduce and stabilise costs. Moreover, life and non life insurance businesses differed substantially in what derive technical efficiency. In the life industry, large firms tend to be relatively less efficient.

Sinha and Chaterjee (2009) studied the cost efficiency of life insurance companies in India during 2002-03 and 2006-07 using the new cost efficiency approach suggested by Tone. Input variables considered for the study were operating expense and commission expense whereas benefits paid to the customers and premium mobilized by the company were the output variables. The results suggest an upward trend in cost efficiency for first three years. However, the trend was reversed for the last two years. Owusu-Ansah et al. (2010) evaluated the performance of Ghanaian general insurance companies for 2002-2007 using DEA. The study used debt capital, equity capital and management expenses as inputs that were used by insurers to produce premium, claims and investment income. It was observed that Ghanaian general insurers operated at an average overall efficiency of 68%, technical efficiency of 87% and scale efficiency of 78%. It was further observed that insurers with higher dimension and market shares tend to have higher efficiencies; implying that general insurers could increase their efficiencies by trying to increase among other things their dimension and market shares.

Ajlouni and Tobaishat (2010), examined the technical efficiency of Jordanian insurance companies during 2000-2006 using DEA. The inputs variables used to measure efficiency were technical reserves, equity, borrowings, and operating expenses, while the outputs include: premium and investment income. The results

reveled that insurers' efficiency was increased over the study period which was reflected in appreciation of their stock prices. Ahmed et al. (2011) examined the impact of firm level characteristics (size, leverage, tangibility, risk, growth, liquidity and age) on performance of listed life insurance companies of Pakistan from 2001 to 2007. The results of Ordinary Least Square (OLS) regression analysis indicated that size, risk and leverage were important determinants of performance while ROA had statistically insignificant relationship with growth, profitability, age and liquidity.

Zhi and Hu (2011) analyzed the efficiency of life insurance companies in the Mainland and Taiwan areas. Findings revealed that efficiency was significantly affected by environmental factors, showing that institutional reform does matter for improving the efficiency of financial institutions. Also, debt equity had a significant effect to increase efficiency, indicating that increases in the market share and financial leverage ratio helped promote efficiency. Further, ownership types had different advantageous effects on different inputs. The years since establishment had no significant effects on efficiency indicating that the younger mainland Chinese life insurance companies do not have disadvantages because it was in an open and competitive market environment.

ANALYSIS OF EFFICIENCY USING DEA

In India 23 life insurance companies existed in the 2010 with dominance of public sector behemoth Life Insurance Corporation of India (LIC of India). LIC of India enjoyed not less than 70 percent market share for all the years considered for study. For this reason LIC was excluded in the study to avoid biasedness. From remaining 22 private sector life insurance companies, study included 14 companies which were registered with IRDA as on 31st March 2005. The researcher considered the time frame of 5 financial years from year 2005-06 to 2009-10. Data was collected from public disclosure of life insurance companies, IRDA website, and annual report of IRDA. Selection of input and output variable for current study was based on literature review and availability of data. 5 variables were used for the study which as given below.

Input 1 - Operating Expenses: This includes employee remuneration, traveling expenses, stationary, communication expenses, advertisement and publicity, interest and bank charges and distribution charges, etc.

Input 2 - Commission Expenses: Salary is paid to the employees of the organization but the advisors, brokers and bancassurance are being paid commission. This is a crucial component of any insurance company.

Input 3 - Total Investment: This includes fund invested for life funds, pension & annuities fund and unit linked plans.

Output 1 - Net Premium: Like sales revenue is important in any other industry, premium is equally important for life insurance companies. The input variables Commission expenses and operating expenses are spent to generate premium. Market share of any insurance company is determined on the basis of premium that it has been able to generate.

Output 2 - Net increase in liabilities - This is net increase in premium. Net increase in net liabilities is taken from L 24 form of public disclosure. This is liability that company has generated due to its business.

RESULTS AND DISCUSSION

It was observed that Indian private life insurers operated at an average overall efficiency of 80 percent, technical efficiency of 86 percent and scale efficiency of 93 percent. There was room for improvement of the overall, technical and scale efficiencies of the insurers since the average efficiencies for the period were observed to be less than 100 percent. It was also observed that the scale efficiency scores were higher than the overall and pure technical efficiency scores. This meant that Indian life insurers were managed with relatively less managerial skills and scale of operation was not a source of inefficiency. The mean of technical efficiency score tended to increase year by year. Numerically the sample means were 0.727, 0.764, 0.772, 0.898 and 0.816 from 2005-06 to 2009-10. This increasing trend indicated that the efficiency of life insurance companies as a whole had increased. Most private sector life insurance

in India gave increasing return to scale indicating that there was huge potential left in companies to expand their operations. India had penetration of just 4 percent which indicated that there was ample opportunity for all insurance companies to grow.

SBI Life Insurance and ICICI Prudential Life insurance were the only two insurance companies which had been efficient for all the years be it CRSTE scores or VRSTE score. Technical efficiency and pure technical efficiency of Birla Sun Life, Aviva, ING Vysya, Max New York and Tata AIG was below the industry standard. But the interesting aspect was that these DMU's had been able to achieve scale efficiency which was higher than the industry standard. This showed that the company's technical efficiency had deteriorated much because of pure technical efficiency. Thus resource allocation and management ability needed to be improved. All the companies except Bajaj Allianz had increasing returns to scale during the last 3 years of the study. Bajaj Allianz had got pure technical efficiency score 1 which meant company management had done good job so far. Its decreasing returns to scale indicated that the company had less potential to grow. HDFC Standard Life Insurance had been efficient only once in the five years but the insurer had shown relatively good efficiency score which ranged between 0.70 to 0.895 for all the years in which the insurer was inefficient. It had potential to grow as it had increasing returns to scale. Insurer had been inefficient in allocation of resources and managerial aspect.

Inefficiency of Shriram and Sahara Life Insurance was due to scale and not because of managerial inefficiency. Sahara India Life Insurance had been inefficient for all years as per the CRSTE scores but it had been efficient for all years as per the VRSTE scores. Their pure technical efficiency score clearly stated that the management of company had performed well and inefficiency was due to scale that was magnitude of their business. Scale inefficiency with increasing return to scale indicated that this insurance company had potential to become a competitive player of life insurance industry. Kotak Mahindra Old Mutual Life Insurance was an efficient DMU for year 2005-06 and 2006-07

but in the subsequent years the insurer had been inefficient. Efficiency score of Reliance Life Insurance were near to that of Kotak Mahindra Old Mutual Life Insurance. All other insurance companies were inefficient compared to SBI and ICICI. Hence it was recommended that all inefficient firms should carefully study the mode of operation of these two insurers to become efficient. It could be said that only SBI Life Insurance and ICICI Life Insurance have been efficient in utilising their inputs to generate outputs. Inefficiency of life insurance companies are mainly because of managerial ability and resource allocation. Both are controllable variables. Managers of inefficient life insurance companies should focus on their managerial ability.

EFFICIENCY BY TYPE OF INSURER

After getting the efficiency scores of private sector Life insurance companies we test the hypothesis given below. The Mann Whitney U test for the non parametric analysis of DEA values is adopted. The constant return to scale efficiency scores are chosen, because this score gives the overall efficiency score.

H₁: There is no difference between efficiency score of life insurance companies having bank network and life insurance companies not having bank network. (Only 4 - ICICI, HDFC, SBI and ING out of 14 banks are integrated with bank network).

H₂: There is no difference between efficiency score of large life insurance companies and small life insurance companies. (Companies having their average capital more than 735 are considered to be large company).

H₃: There is no difference between efficiency score of life insurance companies having large market share and life insurance companies having small market share. (Companies having market share – based on premium generated – more than 5 percent is considered having higher market share).

From hypotheses tests, we can conclude that there is no difference in the efficiency score of the life insurance companies having bank network and life insurance companies not

having bank network. This is because almost all the life insurance companies are in agreement with different banks to sell their insurance product through bancassurance. So in this case the success of Life Insurance Company is depending upon the ability of insurance company to utilize this network in generating leads and converting them into sale. We accept the null hypothesis that there is no significance difference between small insurance companies and large insurance companies. From this we can infer that the equity capital of life insurance companies has no impact on the efficiency of the company. Life insurance companies with large market share are more efficient than life insurance companies with small market share.

CONCLUSION

In this study, we have analyzed technical efficiency of private sector life insurance companies between 2005-06 and 2009-10. This analysis is based on DEA model that allows for the incorporation of multiple inputs and outputs determining relative efficiency. This information will benefit regulators and managers for they can get useful evidence and insights from the DEA analysis. Efficiency has improved over the study period. SBI and ICICI Life Insurance are only companies which have been efficient for all the years of the study. Inefficient life insurance companies can refer to these companies and accordingly can improve their efficiency. In inefficient life insurance companies, inefficiency is caused by managerial inefficiency and less due to scale inefficiency. From our analysis we can conclude that the life insurance industry has huge potential to grow because almost all the companies have increasing returns to scale. Hence, if at this stage investments are made then return on this investment will be more than the investment made.

From hypotheses tests we can conclude that there is no difference in the efficiency score of the life insurance companies having bank network and those not having bank network. There is no difference in the efficiency of small and large insurance companies. Life insurance companies with large market share are more efficient than life insurance companies with small market share.

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Table 1: Average Relative Efficiency of Private Sector Life Insurance Companies from 2005-2006 to 2009-2010

| Company | 2005-2006 | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 |
|--|-----------|-----------|-----------|-----------|-----------|
| Birla Sun Life Insurance | 0.75 | 0.78 | 0.82 | 0.85 | 0.88 |
| Aviva Life Insurance | 0.72 | 0.75 | 0.79 | 0.82 | 0.85 |
| Bajaj Allianz Life Insurance | 0.70 | 0.73 | 0.76 | 0.79 | 0.82 |
| HDFC Standard Life Insurance | 0.68 | 0.71 | 0.74 | 0.77 | 0.80 |
| ICICI Prudential Life Insurance | 0.65 | 0.68 | 0.71 | 0.74 | 0.77 |
| ING Vysya Life Insurance | 0.62 | 0.65 | 0.68 | 0.71 | 0.74 |
| Kotak Mahindra Old Mutual Life Insurance | 0.60 | 0.63 | 0.66 | 0.69 | 0.72 |
| Max New York Life Insurance | 0.58 | 0.61 | 0.64 | 0.67 | 0.70 |
| Met Life Insurance | 0.55 | 0.58 | 0.61 | 0.64 | 0.67 |
| Reliance Life Insurance | 0.52 | 0.55 | 0.58 | 0.61 | 0.64 |
| Shriram Life Insurance | 0.50 | 0.53 | 0.56 | 0.59 | 0.62 |
| Tata Aig Life Insurance | 0.48 | 0.51 | 0.54 | 0.57 | 0.60 |
| Sahara India Life Insurance | 0.45 | 0.48 | 0.51 | 0.54 | 0.57 |
| SBI Life Insurance | 0.42 | 0.45 | 0.48 | 0.51 | 0.54 |

Table 2: Ranking of Life Insurer According to their Efficiency Score

| DMU | CRSTE | VRSTE | Scale |
|--|-------|-------|-------|
| Birla Sun Life Insurance | 7 | 9 | 5 |
| Aviva Life Insurance | 8 | 11 | 6 |
| Bajaj Allianz Life Insurance | 3 | 2 | 11 |
| HDFC Standard Life Insurance | 6 | 8 | 4 |
| ICICI Prudential Life Insurance | 1 | 2 | 1 |
| ING Vysya Life Insurance | 11 | 13 | 10 |
| Kotak Mahindra Old Mutual Life Insurance | 4 | 6 | 8 |
| Max New York Life Insurance | 10 | 10 | 9 |
| Met Life Insurance | 13 | 12 | 12 |
| Reliance Life Insurance | 5 | 7 | 3 |
| Shriram Life Insurance | 9 | 5 | 13 |
| Tata Aig Life Insurance | 12 | 14 | 7 |
| Sahara India Life Insurance | 14 | 2 | 14 |
| SBI Life Insurance | 1 | 2 | 1 |

PURCHASE DECISION INVOLVEMENT: A STUDY OF EDIBLE OILS

Pragya Keshari* and Narendra Kumar**

The concept of purchase-decision involvement has been linked to various consumer behaviour and marketing constructs and has been used by marketers to segment the market. Actually, the scope for the marketer to effectively influence the consumer decision-making process depends upon two major considerations, the kind of decision making involved and the level of involvement in the purchase-decision task. The level of involvement can be used by marketers to segment the consumers into low, moderate, and high involvement groups which can be targeted with different promotional strategies. If a consumer is highly involved in a purchase decision, he will choose the brand carefully and repeatedly. On the other hand, a consumer with less involvement in the purchase-decision task, tend to be less loyal to the brand and may ignore the advertising messages. The present paper is an attempt to measure the level of involvement in the purchase-decision of edible oils. The impact of gender has also been studied on the purchase-decision involvement of edible oils. The data were collected from male and female respondents of Indore city, using Purchase-decision Involvement Scale designed by Mittal in 1989. The data was analyzed using mean score and z-test. The findings of the study have been discussed in the paper.

INTRODUCTION

Understanding the ways in which consumers' involvement levels influence how they use different cues to make purchase decisions has been a topic of research for several decades. Purchase decision involvement is the basis for segmenting the market and is widely accepted by the marketers as an important variable in marketing strategy. Like other purchase-related mind-sets (e.g., brand attitudes, purchase intentions), purchase-decision involvement is measured as close as possible to the time when marketing strategies are to be formulated. Purchase-decision involvement can be defined as the extent and the concern that a consumer brings to bear upon purchase decision task (Mittal, 1989). It is a mind-set concerning his or her view of what the right or wrong choice of the brand would mean to him or her, and correspondingly whether or not he or she would be indifferent as to which of the several available alternatives is bought. Mitchell (1979) has defined purchase involvement as the level of concern for, or interest in the purchase process, triggered by the need to consider a particular purchase. Enduring involvement represents an on going concern with a product that a consumer brought

into a purchase situation (Rothschild, 1979). Bei and Heslin (1996) suggested that this enduring involvement is related to consumers' brand choices.

Purchase Involvement research has primarily focused upon identifying possible differences between high and low involvement purchases. This distinction is based on the intensity of information seeking, the amplitude of information quantity, and the degree of activation (Bloch, 1981). Low involvement is a situation where a consumer wants to buy a product but does not patronizes a particular brand. Generally these types of products are low priced, frequently purchased convenience goods, where product differentiation is difficult and the cost of poor decision is comparatively low. On the other hand, a highly involved consumer carefully selects a brand due to significant price, style, attractiveness, quality or other difference among various brands available. Products like consumer durables, high priced items, health-related products, goods that are infrequently purchased etc. fall in this category. For these types of products, the cost of wrong decision is perceived to be high. A highly involved purchaser is termed as an active

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consumer where as a passive customer treats a purchase as low involvement (Srivastava and Khandai, 2002). Unlike active customer, a passive customer makes no effort to analyze or retain information.

Purchase decision involvement is a function of perceived risk that varies with the type of purchase involved. If the product is expensive and perceived risk is high, the involvement in purchase decision too is high. In addition to this, the value of product for consumer, benefits and accountability of the purchaser towards organization are the elements that play important role in purchase decision involvement (Dhar et al, 2004). Consumer behaviour research has demonstrated that perceived risk is predictive of consumers' situational and enduring involvement in choosing a product. Dowling (1999) contended that consumers' perceptions of risk are considered to be central to their evaluations, choices and behaviour. When perceived risk is high, consumers become more wary and risk averse. High perceived risk leads consumers to become more conservative. In contrast, when the perception of risk is low, consumers will enjoy the positive stimulation provided by products and will evaluate them more positively (Campbell and Goodstein, 2001). Rothschild (1979) and Zaichkowsky (1985) have concluded that when purchase of a product, or a leisure service, is considered to be important to participant's ego, self esteem, or needs, or when there is high level of financial, social or psychological risk, then a high involvement state is likely to exist.

The level of involvement influences the extent of the decision making process and the amount of information search conducted by the consumers (Laurent and Kapferer, 1985). On the other hand, when the product is not important or relevant to participant's self esteem, values, or needs, and perceived to have minimal risk associated with it, they tend to gather little or no evaluative information about choice alternatives and follow relatively simple, non-comprehensive decision-making processes. Processes of purchase decisions undergo various phases of searching and processing of

information depending on the complexity of such decisions. Consumers with high involvement levels are likely to seek out and use information about the choice alternatives and follow a comprehensive process of decision-making. On the other hand, in a low involvement state, they tend to gather little or no evaluative information about choice alternatives and follow relatively simple, non comprehensive, decision-making processes (Zaichkowsky, 1985). The extent of information search is influenced by a number of factors such as time pressure, previous experience, friends' advice, and so on. Mittal (1989) opines that a consumer may not indulge in much information processing if he or she has already acquired the requisite information previously, or relies on expert recommendations, or simply repeats his or her previous choice. This should not be considered as a low involvement purchase unless consumer is indifferent as to which of several available brands is purchased. Present paper is an attempt to measure level of involvement of male and female consumers in purchase-decision of edible oils.

METHODOLOGY

The Study: The study is descriptive in nature undertaken to measure the involvement of consumers while purchasing edible oils and to make comparison in the level of involvement of male and female consumers while purchasing edible oils.

The Sample: The sample consisted of 100 respondents, with a break-up of 50 males and 50 females, from Indore city of Madhya Pradesh.

Tools for Data Collection: Data were collected by administering Purchase Decision Involvement Scale, designed by Mittal (1989).

Tools for Data Analysis: Data was analyzed using mean score and standard deviation. Z-test was applied to compare the level of involvement among males and females, after framing the following null hypothesis.

H₀₁: There is no significant difference in the level of involvement of male and female consumers while making purchase-decision of edible oils.

RESULTS AND DISCUSSION

The mean score was 4.674 which indicate high purchase decision involvement among consumers while purchasing edible oils.

Null hypothesis (H_{01}) was rejected at 0.05 level of significance ($Z_{cal} 2.8 > Z_{tab} 1.96$), which indicates that male and female differ in their degree of involvement while purchasing edible oils. Since the value of mean for male i.e. 34.12 is greater than mean value of female i.e. 31.32, therefore male's involvement in purchasing of edible oil is concluded to be higher than that of females.

The results of the study indicated that consumers are highly involved in purchase-decision of edible oils. Many researchers have concluded that when a purchase is considered by the consumers to be important, as in case of high risk products, a high involvement state exists leading to evaluative processing of marketing communications and to relatively complex decision-making. Dhar et al. (2004) argued that individuals get involved more in purchase decision depending on the nature of product. They make decision objectives by collecting information on utilitarian product attributes. Their needs are identified with functional product attributes that define product performance (Assael, 2001). According to Park and Mittal (1985), there are two main facets of involvement that affect consumer decision-making: motivational component, and reasons for the motivation. They stated that the former indicated cognitive/affective involvement and latter points out utilitarian/value-expressive motive. As far as edible oil is concerned, it comes under utilitarian/value-expressive motive. Involvement of the consumer in purchase of edible oil can be divided into two different sub-constructs: product (that is, utilitarian) and brand (that is, value expression).

Therefore, consumer involved in the purchase decision of edible oil will not only look at many variants available in the market (for e.g. sunflower, groundnut, soyabean oil, etc.), but would also consider various brands of edible oils available in the market (for e.g., Sundrop, Dhara, Saffola, Postman, etc.). Gemunden (1985)

conducted a research to study the involvement for grocery product and reported that for grocery products, perceived risk usually seems to remain below a tolerated threshold. This may be due to the fact that manufacturers of grocery product have clearly understood the importance of consistency and quality to remove the threat of adverse functional consequences. However, psychological risk may still remain within the family which could lead to increased involvement with certain product categories. In the study, gender emerged as an important variable in purchase-decision involvement. Slama and Tashchian (1985), who treat involvement as the relevance of a purchase activity to individual, supported that demographic variables also affect purchase involvement. The results of the study show that involvement of male consumers in the purchase-decision is slightly higher than that of females. A number of factors can be held responsible for this difference.

In most of the Indian families, males are still the decision-makers. They have also become health-conscious with the increasing number of diseases. A health-conscious individual is expected to choose a suitable brand of edible oil under normal circumstances. The results of the study contradicts the findings of Wilkes (1975), who stated that women are apt to be more involved in the purchasing task than men, since women have traditionally been the family purchasing agents. They perceive purchasing as being associated with their role in the family. Richins and Block (1986) asserted that if the consumers are involved in the use of product on day-to-day basis, as in case of edible oils, lasting involvement will enhance the stability of consumer behaviour relating to this product. Deshpande et al (1982) contradicted this by contemplating that products that are purchased repeatedly over time tend to have low importance and involvement. Clarke and Belk (1979) argued that greater effort in consumer purchase decision increases the perceived importance of the purchase decision and thereby increases the potential for post-purchase cognitive dissonance. Another factor that can be attributed to purchase involvement is buying frequency (Shim and Kotsiopoulos, 1993).

Warrington and Shim (2000) concluded that consumers with high involvement in the purchase task are active product information seekers. Therefore, marketers can easily target them with Point-of-purchase displays, targeted promotional strategies and quality customer service. The level of felt involvement among consumers trying to satisfy similar perceived needs is likely to vary across the product category, gender, their values and norms, their sensitivity to peer group influence and the relative impact of situational factors. High involvement products can be marketed more effectively by using rational advertising appeals, while low involvement products seem to require emotional appeals (Crocker et al, 1983). Besides gender, many research findings have confirmed effect of other demographic variables such as age, income, socio-economic status etc. on purchase-decision involvement. Kassarian (1981) reported a positive relationship between socioeconomic status and purchasing involvement. In a study conducted by Westbrook and Fornell (1975), education was found to be positively related with purchase-decision involvement. They asserted that education increase the buyer's need for information related to the purchase decision and thereby increase the value of search and the likelihood of reliance on high value, high cost sources such as Consumer Reports and related buying guides, as well as extensive visits to the retail outlet.

CONCLUSION

The results of the study reveal high level of involvement among male consumers in the purchase-decision of edible oils. The findings of the study have an implication for the marketers. They can use the findings to understand consumer behaviour better and to classify products and advertising messages according to the level of involvement. It can also be used to segment the consumers into low, moderate, and high involvement groups which can then be targeted with different promotional strategies. Further research can be undertaken to study crucially important variables like income, cultural differences, life stage, educational background etc that can affect the purchase-decision involvement. The study

can be replicated on a larger sample and comparisons can be made across various product categories, for better understanding consumer behaviour.

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Table 1 : Showing Overall Mean and Standard Deviation for Purchase-Decision Involvement

| | |
|-----------------------------|------|
| Total number of respondents | 100 |
| Mean | 4.67 |
| Standard Deviation | 1.35 |

Table 2: Showing value of Z at Five Percent level of Significance

| | Male Consumers | Female Consumers |
|--------------------|----------------|------------------|
| Mean Score | 34.12 | 31.32 |
| Standard Deviation | 4.148 | 5.708 |
| Value of Z | | 2.8 |

A JOURNEY OF AMAN PALACE*

INTRODUCTION

In 1996, Sumit Saxena ventured into the hotel industry with a mission to provide dynamic services to the people of Indore. Sumit had no past experience in the hotel industry. However, his father was a well known and renowned builder. He gave freehand to Sumit to take independent decisions as he was of the opinion that a small plant cannot grow under the shadow of a big tree. Sumit decided to be a hotelier and he set up his hotel in the prime location of the city under the name Aman Palace. Sumit visited various hotels across the country and also served as an employee in a leading hotel of the city in various departments from front office to house-keeping to gain experience of the hotel business before entering the industry.

Within a very short span of time, Aman Palace earned the image of a premium hotel providing top class services to its clientele. Sumit was enthusiastic and aggressive businessman. He looked after every department of his hotel independently till his younger brother joined him after completing his master's degree in management. He personally looked after the room servicing, room booking, housekeeping and customer feedback to maintain the standards of his hotel. He trained the staff personnel and there was a daily, weekly and monthly reporting system so as to track any discrepancy in the operational system. The hotel started with 20 rooms, one banquet hall and one restaurant, which was further expanded to a capacity of 50 rooms, two banquet halls and two restaurants in the year 1999. Subsequently, he introduced the concept of marriage garden at his hotel and added 6 marriage gardens for organizing ceremonies, functions and marriage reception by the year 2008.

Over the 12 year period from 1996 to 2008, Sumit did not add any value added services in the hotel other than expanding its capacity. He believed that marriages were milestones not only

in the life of people who were getting married but also in the life of their parents, relatives and friends. Therefore, he wanted to target this segment as he believed that if he proves his services to the satisfaction of the customers then his hotel will be cherished life long by the families and also then their will be no need of advertising and promotion. According to Sumit, he was in the business not only to make profits but also to share happy moments of peoples' life. Thus, he made a habit to meet the customers once before the booking process was done and assured them about the quality of the services rendered to them. Sumit did not appoint any General Manager to look after the operations of the hotel. The hotel had six departmental heads reporting directly to him. The various departments in the hotel were front office, food and beverages, house keeping, stores, accounts and security.

STORES AND PURCHASES

The purchase department had a double check and entry system. After cross checking all the items with respect to the quality, weight and quantity they were sent to the accounts department for the final settlement of the bills. He managed an upto date and latest method of purchase and material handling. He employed new software for accounting and billing purposes. The quality of the food items purchased was thoroughly checked and it was made sure that whatever was provided to the customer was of good quality.

MARKETING AND PROMOTION

Sumit was of the view that in service industry, services speaks about the brand. Thus, he focused on the quality of the services delivered to customers. He believed that the satisfaction of the customers would serve as a strong marketing tool in promoting Aman Palace. Thus, he maintained constant touch with the regular customers through direct mails

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and personal relations. He thought that the word of mouth of his customers will last longer than any advertisement and promotion. Therefore, he had no marketing department or any separate staff for looking after this activity. He himself handled the public relations. The hotel was devoted to servicing of the corporate clients whereas, the marriage gardens were solely oriented towards marriage arrangements. The other players in the marketplace had no such separate venues for informal and formal functions.

HUMAN RESOURCE

The staff in the hotel and the marriage garden had an average age of 35 years. Rigorous induction and training was provided to the staff as per the requirements and standards of the industry. The appraisal system was performance oriented and was done from time to time. The employee turnover was very low due to high morale and motivation of the employees which was attributed to the factors like job rotation and performance based timely appraisals. Sumit was very keen about the overall development of the staff. He constantly gave inputs to develop their skills and then promoted them to the next level.

The total workforce of the hotel was of 250 people. Labor turnover was very low. He practiced unique wage policy for his employees in his concern by providing salary at par with the industry. The off-season in the industry witnessed layoff of the staff strength but Sumit disbursed 50 percent of the salary during off-season along with the holidays of 15 days for recreation and relaxation. He also allowed staff to undertake part time jobs during this period. During the peak season he gave the rest 50 percent which were due in the off-season which made it 150 percent of the salary resulting in increased satisfaction of the staff.

HOUSE KEEPING AND MAINTENANCE

The house keeping and maintenance was a key to customer satisfaction. Earlier, Sumit used to keep his own house keeping staff, but later he outsourced the house keeping department to other outside agencies when the staff

requirement increased with the expansion of his hotel and additional marriage gardens. He had outsourced the house keeping jobs to six agencies besides his own team.

FOOD AND BEVERAGES PRODUCTION AND SERVICE

Sumit was very particular about the quality of food and beverages production and services. The emphasis was mainly on room service of food and beverages. Sumit focused on the in-house guest of the hotel and special attention was given to their needs. The quality of food and beverages was of utmost concern and top class services were given to the hotel guest. Sumit had a strong belief that extending food and beverage facilities to restaurant may affect the quality of the services, thus he did not open a restaurant in his hotel.

ACHIEVEMENTS OF SUMIT

Sumit was an intelligent and proactive businessman. He was a sound decision maker which could be very well understood by his decision to expand his hotel business by adding marriage gardens. Sumit acquired and established the marriage gardens without any financial assistance and loans. He deployed the profits from his hotel and thus utilized the idle funds in the expansion process. He was elected unanimously as the president of City Hotel Owner's Association because of his outstanding performance and remarkable achievements. As president of City Hotel Association, he took initiatives to exempt VAT and got relaxation in corporate taxes for the hotels who had an investment of one crore or above. During his term, he also played important role in getting removed the increased excise rates on the liquors served in the hotels. He was also the president of City Marriage Gardens Owners Association. Sumit was also offered the president post for the state level association, which he refused because of his wide ranging engagements.

EXPANSION PLANS

Sumit was looking forward to achieve the status of a five star hotel for Aman Palace. His other future plans included establishing new

marriage gardens at prominent locations in Indore. Sumit also wanted to expand and tap the new market in the nearby regions. He wondered about what should be his future strategy to cement his existing position and ensure continued growth.

Questions

1. Evaluate the case using SWORT analysis.
2. What strategies should be adopted by the Amar Palace to maintain its brand image?
3. What strategies should be formulated to ensure future growth of Aman Palace?

ASTUTE: VALUE BEYOND TIME*

Astute System Technology Pvt. Ltd. (ASTPL) was South Asia's largest mobile content developer, aggregator and publisher, distributing mobile content to more than 30 operators across 10 countries. ASTPL had registered office located at Indore and corporate offices at Mumbai and New Delhi. It had its offshore marketing offices at Thailand, Dubai, London, and Malaysia. ASTPL was a one-stop-shop for mobile operators, OEMs, portals, brands, corporate and ad-agencies who were in search of the most cutting-edge mobile solutions and VAS (value added services). ASTPL believed in being visionary, proactive and looking at things in fresh and original ways. Its large catalogue of content was designed to accelerate widespread adoption of mobile applications by end users for Indian and International clients. ASTPL had robust experience in wireless domain. It had created more than 250 products, had developed enterprise based applications, and received license directly from BSE (Bombay stock exchange) with world wide rights. It had strategic alliance with hungama.com for content acquisition. It had product rights for FTV, Disney, Kingfisher, 9X, ZeeTv, IPL, Mobile Games-2D/3D, Multi-Player/Single Player, Bollywood, Hollywood, Tollywood (movies and celebrities, including movie based games), Bigadda, 8hands, Vivendi, Virgin Comics etc. to name a few.

ASTPL also offered applications for blogs / messengers /social networking, news media and m-commerce based support. It had also

developed devotional/festive applications, imagery, portfolio of music (3D) applications, financial and utility applications, calendars, slide shows, cricket, text based, sms content and many more branded and non-branded content. It was also into providing mobile marketing solutions to the brands for reaching mass end users, outsourcing, porting and translation services. The content was created, managed and delivered through their platforms which provided telco-grade solution, harmonized across world wide accepted technologies like J2me, Brew, I-Mode, Symbian, Wap, Blackberry, Wince and Palmos. In a short span of 5 years, the company won several national and international awards and recognition. With changing time and demands of clients, ASTPL had been following innovative and interactive marketing approaches without compromising on quality and technology. Standing against intense competition, it had been successfully retaining its market share through offering unique product portfolios.

ASTPL believed in providing best content quality at reasonable price with easy to use widely accessible technology. Another advantage that it had over its competitors was in terms of its wide range of partnerships with varied brands. All their competitors were only in gaming but ASTPL provided multiple levels of games to avoid market saturation. It was constantly focusing on forward and backward integration besides having highly customized client applications and porting tools. ASTPL was a techno-savvy company and catered to most of

*This case was developed by Vipin Choudhary, Amrita Thakre, Kalpana Agrawal (Prestige Institute of Management and Research, Indore) and Richa Tiwari (Prestige Institute of Management, Dewas) during the Twenty First Case Writing Workshop organized by Prestige Institute of Management and Research, Indore in collaboration with Association of Indian Management Schools (AIMS), New Delhi on May 7-9, 2009.

the segments. In addition to its glamorous client and grandeur projects for music, sports, entertainment industry, it also had some projects which were socially relevant such as fishermen information system on mobile phones. Looking at the overwhelming response for the fishermen project, ASTPL was also planning to launch information system projects for blood banks, blood donors, hospitals, patients, etc.

One of the major departments of ASTPL was Brew in which CDMA technology based applications were developed and delivered. The company worked from concept development to delivery of product. Its research team first prepared the discovery document as the client requirement. Then a blue print was developed by designing department and coding was done. It was then forwarded to the testing department. The software was tested under various test environment and then finally ported to client for pilot testing and then was finally implemented.

Quality assurance was a major concern at Astute and the focus was mainly on aspects of quality enhancement with the help of feedback. Quality assurance started from requirement testing when product prototype was prepared later scratch functionality was also tested. Rigorous techniques and processes was used to test quality of their services on a constant basis through TBT and Veri Sign. Besides this, the organization had an audio tech department, it developed new music based applications and complete audio support for games and applications. Another department was human resource department which was the most valued department in a short span of four years. The company was extremely people focused and ensured a healthy work environment. The work culture was westernized with an open door policy and employees at all levels were called as 'Saan' in Japanese language means 'Ji' in Hindi. Senior executives always used to enquire about personal problems of their subordinates and they used to give suggestions also to deal with the situation. Recognition and due concern for employees was a key for ASTPL's growth. Financial needs were also fulfilled, as the salary was at par with the best in the industry. Employee's stock options were also provided as

incentives to further motivate the employees. The greatest challenge the company faced employee retention. The performance appraisal followed by the company was unique. Key Result Areas (KRA) of each level were identified and quantified. The average age of people in Astute was twenty two years and the CEO was influenced by Japanese Culture.

One fine summer afternoon, Vijay Jain, Founder and CEO, ASPTL was discussing with his HR head Amit Gaosandhe, about how fast the world was moving. Vijay was enthusiastically sharing his experience about his recent visit to Japan for an international conference on emerging trends in value-added service (VAS). Vijay had a dream for India to be global leader in VAS technology by 2015. His vision for ASTPL was to become one of the most trusted brands of South Asia in gaming and application space by 2012. Amit, expressed his deep concern about human resources requirements to achieve the desired organizational goals. He shared his concern about the city namely problems relating to infrastructure such as road, water, power, railways and air connectivity. He was also concerned about the attitude of youngsters of region that mostly they wanted instant success and that too without much of efforts. Amit pointed out the skill set requirement for the potential employees and argued that they were not getting trained manpower in the organization as the technology with which they were working was not so popular.

During their conversation, Vijay highlighted that mobile phones today have moved beyond their fundamental role of communication and had graduated to become an extension of the persona of the users. Customers continuously wanted more from their mobile phones. They used their cellular phones to play games, read news headlines and astrology updates, surf the internet, and listen to music, make others listen to their music, to know score of cricket match, to know the current price of their stocks, booking movie, railway and airline tickets, checking their bank balance, weather information and so on. Thus, there existed a vast world beyond voice that needed to be explored and tapped and the entire cellular industry was heading towards it to provide innovative options

to their customers. Spoilt by choice, the mobile phone subscribers were beginning to choose their operators on the basis of the value added services they offered. Vijay emphasized that the increased importance of VAS had also made content developers' burn the midnight oil to come up with better and newer concepts and services. Vijay had a view that future will be dominated by triple play technology viz.

convergence of television, internet and cell phones.

Questions

1. Analyze the ASTPL using SWOT.
2. Analyse the HR issues involved in tapping and retaining talented human resources at ASTPL.

CHASING PRICES AND NOT VOLUMES*

INTRODUCTION

Getex Group, was established in early 1950's to manufacture diesel engines, spares and gears. In 1991, the group further added to its capabilities by setting up Getex Differential Gears (GDG). GDG was recognized for its top quality products, best manufacturing practices and outstanding customer service. GDG had a vision of being recognized as a world class gear manufacturer. It catered to the ever growing needs of the axel gear market for light and heavy motor vehicles like cars, trucks, tractors, etc. It also manufactured a wide range of crown wheel and pinion sets, bevel gears, bevel pinions, spider kit assemblies and differential cages and housings. GDG soon became one of the major players in the replacement market due to its high quality products, competitive pricing and high standards of customer service. GDG generated 50 percent of its revenues from overseas market like Thailand, Malaysia, USA, Pakistan, South Africa, Germany and China. It had two major competitors with market shares of 50 percent and 25 percent whereas, GDG had 15 percent market share in domestic market.

GDG had a self contained setup with modern equipments, competent R&D team, trained manpower and in-house manufacturing of cutting tools jigs and fixtures, which also enabled the company to cut down new product development time and cost to a large extent. GDG had state-of-the-art manufacturing technology and knowledge which made them leaders not

only in domestic but also in international market. GDG exported 75 percent of its total produce. In the year 2008, recession in US economy affected the world economy which led to a reduction in GDG's overseas orders and the exports reduced to 40 percent. GDG also had to shift its focus from overseas to domestic market. M. R. Khanna was the Managing Director of GDG. There were 350 employees in GDG including General Manager (Commercial) and General Manager (Technical).

PRODUCT RANGE AND QUALITY

GDG manufactured five different kinds of automotive spare parts for light and heavy motor vehicles. The products category included crown wheel and pinion, straight bevel gears, curvic couplings and face clutches, spider kit assemblies and differential cages and housing. The company was ISO 9000 certified and utilized best manufacturing practices. The company operated on six sigma, TPM and TQM industry standards. GDG believed in producing highest quality differential part with the best possible prices using the latest manufacturing and metallurgical processes available. This was made possible by imposing stringent quality control programs at all stages from the receipt of forgings to the packaging of the end product.

SALES AND DISTRIBUTION NETWORK

GDG was backed by sales network spread across India which facilitated its products in the

*This case was developed by Ranjana Patel, Bhavna Sharma, Ritu Khabia (Prestige Institute of Management and Research, Indore) and Vaishali Shah (Indukaka Ipocowala Institute of Management, Anand, Gujarat) during the Twenty First Case Writing Workshop organized by Prestige Institute of Management and Research, Indore in collaboration with Association of Indian Management Schools (AIMS), New Delhi on May 7-9, 2009.

Indian replacement market. GDG also had zonal sales offices throughout India to ensure quality services and support to all its customers. It also had a well established network in overseas market. GDG generated 75 percent of its sales from overseas market. In August 2008, when the raw material prices of steel rose, all the companies had to increase the prices of their finished products. After January 2009, due to slowdown in international economic scene, there was a severe downfall in raw material prices due to which all the companies reduced their product prices and reverted back to their previous prices. At this point of time Khanna, took a strategic decision of not rolling back the prices and continued selling at the increased rates

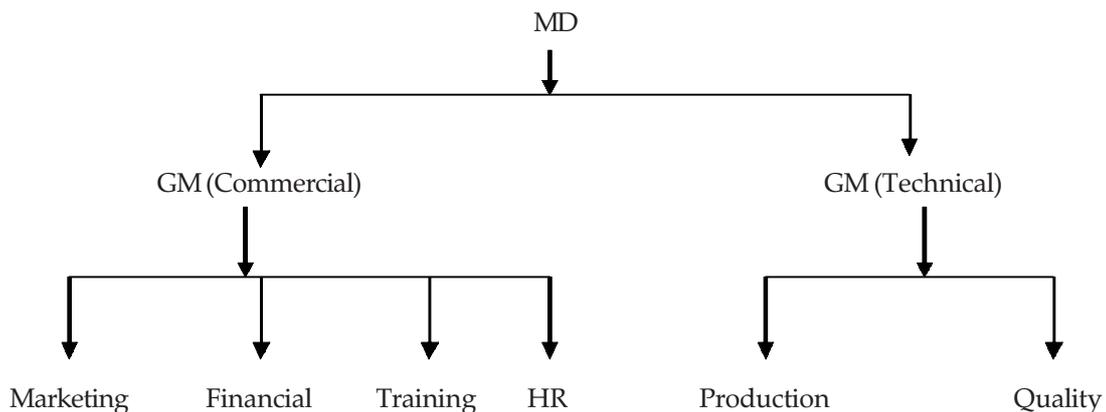
only, which lead to an increase in margin of upto 45 percent. The company was still able to sell all its produce and also achieved the set targets. However, Gupta, G.M., Commercial Division, was worried with this decision as he believed that the higher margin may cut down the profits and sales as the competitors were selling at low prices.

QUESTIONS

1. Do a SWOT analysis of GDG.
2. If you were in Mr. Gupta's place what strategy would you adopt in a recessionary economy to sustain and enhance GDG's market share?

ANNEXURE

GDG's Organizational Structure



DANCING TO A NEW TUNE: A CASE STUDY OF MPSE*

MPSE was established in the 1928 as an association with around 150 member brokers. The Madhya Pradesh Stock Exchange (MPSE) was established in pre independent India as an Association of persons in 1928 with 150 brokers members. The main objective was to provide a trading platform for shares largely of textile companies. It was granted permanent recognition under the provisions of the Securities Contract (Regulation) Act, 1956 ("SCRA"), by the Government of India in 1988. MPSE currently had 185 broker members, including some of the leading brokering houses in India. Around 343 companies, including some of the leading corporates of the country were listed on MPSE. This was the only regional stock exchange having the name of the State, thus, making it operational in a wider area unlike other regional exchanges which had city specific names, like Pune Stock Exchange, Madras Stock Exchange to name a few.

The exchange registered its peak business from 1985-1995 using the traditional pattern of outcry system. From 1995-2000 the country went through an economic recession which saw a number of companies going bankrupt and traders losing confidence in the stock exchanges. MPSE was a typical example of a regional exchange whose trading volumes reduced drastically and it became difficult to survive. In 1996, SEBI, which was a watch dog of capital markets in India became active and came up with various initiatives for regulating the market and enhancing transparency.

The new initiatives of SEBI, included the establishment of NSE in 1996 to provide an online trading platform at a national level to enhance transparency in the trading mechanism. Following this MPSE also started thinking of transformation and they tried their level best to upgrade the technology, and gave contracts to CMC limited for developing the trading platform in 1998. They paid Rs.4.5 crores for upgradation

which consumed 50 percent of their capital. But, unfortunately, the software and hardware could not be implemented properly and the entire process fizzled out and this was true for most of the regional stock exchanges.

The emergence of NSE and BSE as a national level exchange and inability of MPSE to provide online trading to its members was a major cause of non performance. The major trade volume was also with these two exchanges. The service initiatives taken by NSE like starting of online trading facility with excellent technology and backup support also proved a major hurdle for regional stock exchanges like MPSE. As MPSE was not in a position to upgrade and purchase the heavy softwares, it could not provide the online trading facilities to its clients and due to this many of their clients shifted to the NSE platform. To come out of these problems namely, low volumes, reducing market share and broker members who started shifting to NSE, MPSE took the trading membership as a broker with NSE and BSE. They established a 100 percent subsidiary of MPSE Ltd. as MPSE Securities Ltd in 1998 and it was a brokering arm of MPSE Ltd.

REVIVAL PHASE

Madhya Pradesh Stock Exchange, set up as association of persons was now incorporated as a for-profit company limited by the shares and demutualisation. With this, the ownership and management was segregated from their trading rights. Thus, there only existed one class of trading members who enjoyed similar rights and privileges. A uniform standard was maintained in terms of the capital adequacy, deposits and fees for admitting any one as a trading member or for accepting his surrender. Voting rights of the shareholders, also trading members, were limited to 5 percent and people who were not shareholders but had trading rights were required to hold minimum of 51 percent of equity stake of the corporatised and demutualised stock exchange.

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The exchange however, continued to face problems even after the demutualization of the regional stock exchanges in 2006 by SEBI. As per the SEBI guidelines on demutualization, every regional stock exchange had to constitute a new board and thus, the MPSE board was reconstituted. Now MPSE operated and managed by a board headed by an ex-officio as Executive Director. The 49 percent representation on the board was of the 51 percent strategic share holders. The rest 25 percent was from trading members elected by shareholders. Considering the public interest the remaining representation was of members nominated from SEBI.

After 2007, Santosh Mucchal and Ashish Goyal who were Chartered Accountant by profession took over the Board. Mucchal and Goyal had to find new vision for the exchange and they faced serious HR issues, severe market challenges, change in operational processes and turbulent economic times. The new board took several initiatives to revive the operation and image of the stock exchange by providing various services through MPSE securities. The major initiatives taken by them included the starting of the online trading platform through NSE and BSE, providing the depository services by taking the membership of CDSL, getting approval to start the F&O trading desk, initiative to start an SME exchange in association with 13 other regional stock exchanges under interconnected stock exchange of which they were the member initiator and also the establishment of MPSE Institute of Knowledge Management (MIKM) for creating awareness among various strata of the society.

The management realized that most of their members were doing volume trade with brokers of other platforms like BSE and NSE. They felt that if these brokers were provided the facilities through MPSE Securities Ltd. the exchange would be able to increase volumes. They invested a huge amount to upgrade the technological base for providing better service as a broker and tried to differentiate themselves with other leading brokers. The MPSE Securities Ltd. took many steps to reposition themselves with the share broking community. The new punch line "Trade with Trust" was focused for all the business

operations. In order to provide a bundle of services, the MPSE Securities Ltd. had taken the membership of CDSL for delivering the depository services to their members. This allowed the members to open and maintain demat account with them only. Thus, the transfer of shares which initially was done through another depository participant was done by MPSE Securities saving time and cost to members.

MPSE was also in the process of finalizing an SME (Small and Medium Enterprises) Exchange, where companies below 25.00 crores net worth could be listed. The guidelines for SME exchange were already announced by SEBI. There were more than 10,000 companies that had registered with ROC in the region. Thousands of SMEs based in Central India could not get listed themselves in the BSE/NSE due to minimum capital norms. Majority of these were SME's set up by the local as well as other entrepreneurs thus there was a pressing need for a regional stock exchange to cater to the capital/trading requirements. These companies were the targeted clients of MPSE. Thus, MPSE had an edge over BSE & NSE, as it has greater accessibility to SMEs in the Central India region. Already 141 companies were listed on Madhya Pradesh Stock Exchange Limited, of which, majority were in SME category. These companies were expected to be the primary clients of MPSE as soon as the trading activities re-started.

MPSE, in order to bridge the gap between investors and knowledge of stock market / financial products, promoted an education institute with an objective of imparting investor education and financial literacy in the field of capital market. They named the institute MPSE Institute of Knowledge Management (MIKM). MIKM offered certified courses for introduction to capital market, fundamental analysis, technical analysis, mutual fund, derivatives, intra-day trading strategies, depository, and commodities. MIKM was in talks with NSE, BSE, MCX, AMFI, to hold their exams in the premises of MPSE. MIKM had a state of art classroom with a capacity of 40 students and latest technological gazettes. MIKM was in an advanced stage of finalization with four business colleges of Indore for 45 days training of students. MIKM had already

conducted classes for CA final students and 12th class school students.

Besides MIKM, the management also took a number of initiatives for developing its staff. The employees of the exchange were adopted to working in the old laid back style and were not equipped to handle the dynamic market scenario. The employees were also not IT savvy and the management decided that there was huge training requirement for the existing staff. The management decided not to retrench any of the old employees but started exhaustive staff training programs. These training programs focused on ungradation of knowledge with regard to technology as well as back office processes. The functions of the organization were departmentalized and new structure was clearly defined. The department heads were required to make presentation on every Saturday on work related issues as well as come up with possible solutions. A staff curriculum diary was distributed to each employee where employees had to note the daily agenda which was checked by the departmental heads. Placards with quotes to enhanced customer service were given to employees to reinforce need for improved customer satisfaction.

The management also relocated their office to a new building in the heart of the city investing heavily in infrastructure to renovate the sagging image of MPSE. To increase brand image the management started services like investor awareness program through classroom training at the new premises through MIKM. MPSE also set up an advisory board which was constituted of directors of top management institutions. School children and C.A. students were also offered training to understand the concept of stock exchange and these programs were very well received by the participants. Slowly the image of MPSE which was considered an obsolete stock exchange was revived to an operational Stock exchange.

In order to increase volume the MPSE Securities Limited started encouraging member broker to expand their services to other cities in outside M.P. The exchange opened the regional offices in different states with state of art

technology. Branches had cubicals which were given on rent to the members to start their broking. The brokers could operate from these regional offices through MPSE Securities Limited and were provided risk management system due to which they could do surveillance of their client accounts at any point of time. Brokers who expanded to more than three locations were given a software costing Rs.70,000 at absolutely no cost for increasing their operational efficiency.

Despite at all these initiatives the stock exchange including its subsidiary had not been able to generate profit volumes and huge investments were already done in destructivity the exchange. The management was worried as it was apparent that the mindset of members could be changed. Moreover, the efforts to increase the footfall so as to enhance the brand image will be beneficial or not. Being low on funds, heavy advertising was also a challenge. The high market share (98 percent) enjoyed by NSE and BSE was difficult to compete with. Being monopoly players these exchanges controlled cost like connectivity cost through lease line which was not in the hand of the exchange and could be arbitrarily increased by these players. MCX SX a new exchange, was being launched in the near future floated by the largest commodity exchange in India. This also posed a new threat and challenge to the management.

Questions

1. Do a SWOT analysis of MPSE.
2. Do you think that the steps taken by Muchal and Goyal were appropriate to renew the efficiency of MPS.
3. If you were a part of top management of MPSE, what strategies would you have adopted to ensure increase in finance share and marketing.
4. Comment on the decision taken by Mucchal to start MIKM.
5. What were the main strategic options for MPSE at the time of management change?
6. Analyze the MPSE's branding strategy?

OK BANK – THE ROAD AHEAD*

On a hot may afternoon, branch manager of OK Bank located in city of Indore was going through reports of the number of accounts in his branch and their distribution. It was two years since the branch had come up in Indore at a premium location on MG road. However, the bank was able to generate only 10 percent of the business as compared to what the other private and foreign banks located in its vicinity had already garnered. He wondered whether this was because of the niche marketing strategy adopted by OK bank as its main policy or it due to the recession in the global economy.

INDIAN BANKING INDUSTRY

The Indian banking industry which was governed by the Banking Regulation Act of India, 1949 could be broadly classified into two major categories non scheduled banks and scheduled banks. The scheduled banks comprised of commercial banks and the co-operative banks. In terms of ownership, the commercial banks could be further grouped into nationalized banks, State Bank of India and its group banks, regional rural banks and private sector banks – both domestic and foreign.

The first phase of financial reforms resulted in a nationalization of 14 major banks in 1969 and resulted in a shift from class banking to mass banking. This in turn resulted in a significant growth in the geographical coverage of banks. Every bank had to earmark a minimum percentage of their loan portfolio to the sectors identified as priority sector. The manufacturing sector also grew during the 1970's in a protected environment where they received a large part of their financial needs from nationalized bank. The next wave of reforms saw the nationalization of six more commercial banks in 1980. Since then the number of scheduled commercial banks increased four folds and the number of bank branches increased eight folds.

After the second phase of financial sector reforms and liberalization of the sector in early

90's the public sector banks found it extremely difficult to compete with the new private sector banks and the foreign banks. The new private sector banks first made their appearance after the guidelines permitting them were issued in January, 1993. These banks due to their late start had access to the state of art technology which in turn helped them to save their manpower cost and provide better services.

The retail banking industry in India covered industry segments like housing loans, auto loans, personal loan, educational loan, consumer durable loan and credit cards and constituted 25 percent of the total credit by banks. Retail banking was expected to grow at a Cumulative Annual Growth Rate (CAGR) of 28 percent to touch a figure of Rs.9.7 lakh crores by the year 2010. This required expansion and diversification of retail product portfolio, better penetration and faster service mechanism.

ABOUT OK BANK

OK Bank was incorporated as a public limited company on 21st Nov, 2003 and got its certificate of commencement of business on 21st Jan, 2004. RBI granted the license to commence banking operations in India on 24th May, 2004 under section 22(1) of the banking regulations of 1949. OK Bank had come out with an IPO on 15th June, 2005 priced at Rs. 45 per share to raise Rs. 315 crore and the issue was over-subscribed. OK Bank had 117 branches in different cities and towns of India.

OK Bank had only one branch located in State of Madhya Pradesh at Indore. This branch was opened to cater to the most populous and growing city in Madhya Pradesh with population of about 30 lakhs. Indore, commercial hub of Central India was one of the fastest growing Tier II cities in India. The average annual growth rate of population was around 3 percent. It was a favored test market for industries owing to the diversity of its population. The OK Bank branch was facing a

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tough competition in form of big competitors such as ICICI bank, HDFC and Citi Group, to name a few. OK Bank was, thus, fighting for its brand image and proper positioning in the niche market. In Indore region, the customers were not able to recognize its name although it was providing world class technology and services to its customers.

The Indore branch of the bank was able to secure a customer base of 1970 accounts in its two years of existence. The bank had a high quality technology and highest standards of service quality and operational excellence. OK bank believed that differentiation began with its service and represented the bank's fundamental goal of being a highly service oriented financial institution. The endeavor at OK Bank was to provide an unprecedented delightful banking experience. OK bank was the only private bank set up in the last 14 years in India which had got Greenfield License (A Greenfield license is given to a private bank set up by professionals without any backing of any company or other banks) from RBI.

Technology was a key differentiator at OK Bank. OK Bank was aggressively following and using technology and knowledge driven products to ensure proactive, on-demand support to meet the growth requirements, as well as the continuous development of the systems infrastructure and delivery channels. It deployed FLEXCUBE, the top core banking solution as its core banking platform which was integrated in the system by Wipro. OK Bank's USP lay in an online account aggregation service powered by YODLEE known as money monitor which was the first of its kind service in India and would help its customers in managing their money and financial commitments. With money monitor, OK bank internet banking customers could securely access, view, print and receive alerts of all their financial information including online banking, bill payment, brokerage, loans, credit cards, insurance fixed deposits and reward points information from both OK bank and other financial institutions through a single user interface. The key features of money monitor included holistic financial picture, personal data reports, expense categorization, budgeting, alerts, lifetime storage and universal portfolio

tracker. It was expected that the money monitor would deliver a truly personal experience for the banks, retail and wealth management clients and would provide an unparalleled experience as well as give them control over their finances.

PRODUCT PROFILE

OK bank offered wide range of financial services such as business banking, retail banking, corporate finance, investment banking, transaction banking and financial markets operations to the corporate and institutes. It also offered comprehensive financial and risk management solutions. Business banking was a dedicated business of the bank to service small and medium enterprise (SME's) and improved their access to finance including the term finance and business development services, thereby, fostering growth, competitiveness and employment creation.

Within the purview of retail banking, the bank offered various accounts such as savings, salary, current and foreign currency (domestic), retail loans such as personal and small business loans and fixed deposits. Corporate financial solutions were provided to local corporate, multi national corporations, financial institutions and public sector units. Under investment banking the bank was involved in identification, structuring and execution of transactions such as mergers and acquisitions, divestitures, private equity indications and IPO advisory. The bank also provided a wide range of merchant banking and equity placement services.

Transaction banking at the bank was focused upon creating and introducing efficiencies for the customers in managing their financial supply chain which included value added solutions for working capital management, cash management, capital market services, trade finance. Under the financial market services, the Bank provided client sales and market making services, proprietary trading and balance sheet management activities.

QUALITY INITIATIVES

The bank adopted best practices in terms of the highest standard of service quality and operational excellence with innovative state of

art technology and offered comprehensive banking and financial solutions. Seven of its branches were ISO-9001-2000 certified whereas, the remaining branches met stringent internal quality standards as given under ISO certification guidelines. The bank followed six sigma approach in its quality management whereby, key processes had been streamlined for the benefit of the customers, i.e., reduced turnaround time, reduced waiting period etc.

CORPORATE SOCIAL RESPONSIBILITY

The bank had a vision to champion responsible banking in India. According to the bank, the concepts of the corporate social responsibility and sustainability were embedded in the DNA of the organization and integrated in its business focus. It was committed to the long term value to the society and differentiated itself in the market place based on a strong sustainability mandate and flexible and open in its approach. The bank was engaged with global thought leadership forum like the Clinton Global Incentive (CGI), Triple Bottom Line Investing (TBLI) and Tallberg forum. OK bank also became the first Indian bank to become a signatory with United Nations Environment Programme.

HUMAN RESOURCES

Whenever a new employee joined the bank, he was taken on an initial six months probationary period during which the employee worked as a clientele service partner. Subsequently, on the successful completion of the probation period, the employee was shifted to other domains such as operations or relationship management along with an option to continue in the same sales profile. Employees were moved between the different departments to give them a holistic view of the banking operations. Incentive structure was better than the public sector banks but was not comparable with other foreign banks. Performance appraisal was basically done by superior and was mainly hierarchical. Exit interviews for the employees were not formally conducted rather a telephonic follow up was made by the HR department.

OK Bank had a number of printed manuals for the policies and procedure. Bank had organized various short term orientation

programs at the head office and its own branches. There were target based jobs and incentives to the employee. Bank had also implemented quality circles approach and rewarded the employee through awards and incentives. Regular meetings were organized to guide the employees and for sharing the knowledge. Fortnightly meetings among the top managers at branch was also organized for the policy decisions. Daily briefings were held for sales personnel. Attrition rate was high in the initial periods due to the boom in the financial services but later on was reduced after 2008 due to the economic recession.

MARKETING PROCESS

OK Bank was basically a relationship driven bank targeting the customers having income more than six lakhs per annum. It had a limited workforce in terms of sales team as they had selective clientele. They regularly organized micro marketing events so that they could create market awareness. They did niche marketing such as providing sponsorships for Yeshwant Club, ITC, etc. They catered mainly to the area of 3 kms around their branch which was easily, one of the premium locations of Indore. For creating brand awareness the bank had organized essay writing competitions for kids and canopy events in the posh colonies of Indore. Financial analysis of the parents of the kids who participated in the painting competition was mailed to them in search of prospective clients. Free health check ups were also provided. However, at the local level no market survey was being conducted by the branch to assess the need of local people.

ROAD AHEAD

OK bank found itself at crossroad, one road went to the mass banking strategy adopted by the private sectors bank and the other road went towards the exclusive client positioning done by foreign banks. The third road which might not be ever trodden was that of PSU's and cooperative banks. The question was whether OK bank would follow the path of other private banks or would chart its own path through the banking maze ahead. The demand of the time was for a tax savy, innovative and knowledge driven bank which it fulfilled very well.

However, in the long run the major issues were of sustainability and survival in a cut throat banking environment.

Questions

1. Do a SWOT analysis of OK bank.

2. Examine the likely impact of global recession on bank.
3. Give suggestions to the branch manager regarding growth strategies that the bank should adopt in the current situation.

RETAIL ASSET CENTRE: MARKETING ETHICAL VALUES*

INTRODUCTION

Industrial Development Bank of India (IDBI) was set up under the parliament act as a wholly-owned subsidiary of Reserve Bank of India (RBI) in July 1964. However, in February 1976, the ownership of IDBI was transferred to Government of India. As a part of its expansion plan, IDBI in 1993, set up IDBI Capital Market Services Ltd. as a wholly-owned subsidiary to offer a broad range of financial services including bond trading, equity broking, client asset management and depository services. In September 1994, in response to RBI's policy of opening up domestic banking sector to private participation, IDBI in association with SIDBI set up IDBI Bank Ltd. IDBI was vested with the responsibility of coordinating the working of institutions engaged in financing, promoting and developing industries. It had evolved an appropriate mechanism for this purpose. It had also undertaken wide-range of promotional activities including entrepreneurship development programs for new entrepreneurs, provision of consultancy services for small and medium enterprises, up-gradation of technology and programs for economic upliftment of the underprivileged.

IDBI Bank, promoted by IDBI Group started in November 1995 with a branch at Indore with an equity capital base of Rs. 1000 million. IDBI created Retail Asset Centre (RAC) as a strategic business unit (SBU) to cater the customers credit needs. RAC, Indore (Madhya Pradesh) India was formed in the dawn of twenty first century

focusing on providing services in the field of real state, personal and education loans. According to Ravi Kumar Roy, regional and cluster head of RAC- MP and Chhatisgarh, since inception, RAC had captured twenty percent share in disbursing loans in the real estate market of Indore. Amongst the loan providers RAC was able to secure second position with in the short span of seven years. Among twelve RACs of IDBI in western India, RAC Indore stood at the top in disbursing highest volume of loans.

RAC followed the philosophy of its parent company IDBI and believed in being ethical. They boasted of being fully transparent in their relationships with their customers. Being an offshoot of IDBI, RAC enjoyed the goodwill created by IDBI in market. The bank also had personalized contacts with the customers which played the vital role in developing retail business. According to Roy, "Once you became a customer of IDBI you stay with it for a long time. RAC had four vertical departments, viz. marketing, operations, collections and credits. Despite having separate identities these departments worked in unison. Their Indore office acted as a hub supporting and providing back office support to all their zonal offices in MP and Chhattisgarh. One of the major debacles in selling loan-based product in Indore was the presence of unorganized private moneylenders and non-banking financial corporations (NBFC). They gave stiff competition to RAC, as they did not follow approving strategies as rigid as that of RAC. On the other hand, customers asking

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for a loan were themselves very indisCIPLINED in keeping their financial records. Out of the entire loan applications, twenty percent were rejected due to non fulfillment of the documentary requirement.

INDUSTRY SCENARIO

Retail banking in India was not a new phenomenon. It had always been prevalent in India in various forms. For the last few years, it had become synonymous with mainstream banking for many banks. The typical products offered in the Indian retail banking segment were housing loans, consumer loans for purchase of durables, auto loans, credit cards and educational loans. The loans were marketed under attractive brand names to differentiate the products offered by different banks. India in the year 2003-2004 had seen the loan values of these retail lending typically, ranging between Rs.20,000 to Rs.100 lakh. The loans were generally extended for duration of five to seven years with housing loans granted for a longer duration of 15 years. The retail lending had turned out to be a key profit driver for banks with retail portfolio constituting 21.5 percent of total outstanding advances as on March 2004. The overall impairment of the retail loan portfolio worked out much less than the gross Non Performing Assets (NPA) ratio for the entire loan portfolio. Within the retail segment, the housing loans had the least gross asset impairment. In fact, retailing make ample business sense in the banking sector. While new generation private sector banks had been able to create a niche and even the public sector banks had not lagged behind. Leveraging their vast branch network and outreach, banks like IDBI and SBI have aggressively forayed to garner a larger slice of the retail pie. By international standards, however, there was still much scope for retail banking in India.

PRODUCT PROFILE

The range of products offered by RAC in the MP and Chhatisgarh market were housing loans, personal loans, education loans and reverse mortgage loans. Out of which housing loan accounted for more than 50 percent of the total volume of business. IDBI ultra flexible home loans had the advantage of maximum funding, as it gave flexibility of choosing between floating

or fixed interest rate, attractive rate of interest, EMI on daily reducing balance, personalized doorstep service, simple documentation, legal and technical assistance, balance transfer facility and reassessment and adjustment of applicant's loan eligibility in case of change of income and residence status. RAC had differentiated their product from other banks by providing a specially designed insurance cover with IDBI home loans. So even if a calamity struck, the person taking a loan from the RAC did not have to worry.

Personal loans from IDBI also had the insurance cover with it. In case of death or disability due to an accident, the insurance company would pay the principle outstanding. In case of loss of job, the insurance company would pay the EMIs for up to 3 months. Applying for a personal loan was very simple and even can be applied by online banking or through telephonic assistance. Education loan which was a new addition in the portfolio aimed at providing financial support to deserving/meritorious students for pursuing higher education in India and abroad. With an array of courses to choose from and easy repayment options, the RAC made sure that customer got complete financial backing. Installment based loans were available for most of the traditional as well as professional courses offered by universities in India and abroad. Another scheme was reverse mortgage loans which seek to monetise the house as an asset and specifically the owner's equity in the house. The scheme was targeted to the senior citizen borrowers mortgaging the house property to IDBI, in return of periodic payments to the borrowers during the latter's lifetime to help them in sustaining themselves.

MARKETING STRATEGIES

RAC marketed these products through a chain of the direct sales teams (DSTs) and direct sales associates (DSAs). They had thirteen employees giving support to their teams in different areas of MP and Chhatisgarh. An associate company of around 40 DSAs was involved in direct marketing and selling of these product mix. Fifteen of these were looking after

home loan products and the rent took care of personal and educational loans. IDBI offered the most competitive rates in the credit markets and their interest rates were lowest with no hidden cost. RAC was proud of themselves in being transparent and trust worthy in their dealings.

According to Roy, IDBI believed in using personal modes of communications rather than using advertising and other non-personal means. Instead of spending a lot of resources in mass media campaigns they preferred to have contact meeting. For home loans they regularly organized builder meets where they invited all the major builders of that particular area. Through these meets RAC initialized and maintained cordial relationship with builders who send their customer to RAC. Besides these meets RAC had advertising plans for their home loans. These advertisements were released during festival times like Holi and Diwali to highlight their sales promotion scheme.

CHALLENGES

RAC, with most transparent and ethical practices was able to create new horizons in the market. But, the competition from the unorganized money lenders, non-banking financial institutions like India Bulls, Sundarams, etc. and domestic private banks such as HDFC, (the market leader) and foreign private sector banks such as CitiBank and Standard Chartered

which were also catering to the credit needs of the customers posed a major challenge in front of RAC. Second, rising indebtedness was a likely cause for concern in the future. Besides, there were network management challenges; whereby, keeping this complex, distributed networks and applications operating properly in support of business objectives was also essential. Specific challenge before RAC was to ensure that account transaction applications run efficiently between the branch offices and data centers. The foreign and domestic private banks were aggressively making their presence felt in Indian market. In this changing scenario, Roy wondered whether the RAC would be able to become the market leader.

Questions

1. Do you think that the transparent and ethical behavior of organizations especially in banking sector helps in retaining and attracting customers.
2. How does the indisciplined nature of Indore customers affect the efficiency of RAC? What strategic decisions should be taken by RAC to meet this challenge?
3. Evaluate the existing marketing strategies of RAC. Suggest a marketing strategy considering the divergent customer base of the bank.

SWEAT TALE OF SWEET TASTE*

HISTORICAL BACKGROUND

Yummy Foods Ltd. established in 1929, was a US \$458 million conglomerate which had started its operations in India during the British rule. The main motive for setting it up was to spread joy and cheer to children and adults alike all over the country with its sweets and candies. To give shape to this idea, a small factory was set up in the suburbs of Mumbai to manufacture sweets and toffees. A decade later it was upgraded to manufacture biscuits as well. Since then, Yummy, the name had grown in all directions, won international fame and had been sweetening people's lives all over India and abroad. Yummy Foods Ltd. was the largest manufacturer of biscuits and confectionary for almost 80 years. In biscuits, they had glucose, milk, sweet and salted, cream, wafer cream, cumin seeds and cheese categories. In confectionery, they had a range of toffees, hard boiled candies available in chocolate, mint, cola and tropical fruit flavors. Some of these were double layered toffees and centre filled candies packed in rolls or pillow packs, or had single or double twist wrapping.

ABOUT YUMMY FOODS LTD.

Yummy was the producer of the world's largest selling biscuits and its name symbolized quality, nutrition and great taste. With reach spanning even the remotest villages of India, the company had come a long way since its inception. With 40 percent share of the total biscuit market and 15 percent share of the total confectionary market in India, Yummy Foods Ltd. had grown to become a multi million dollar company. Over the decades the efforts of their research and development wing had contributed to the manifold growth in various categories. Many of the Yummy's products, biscuits, confectioneries were the market leaders in their category, and had won acclaims and awards at the Monde selection, since 1971. The immense

popularity of Yummy's products in India was always a challenge to their production capacity. Now using more modern techniques for capacity expansion they had begun spreading their wings and were going global. Yummy biscuits and confectionaries were fast gaining acceptance in international markets such as middle east Africa, south east Asia and the more sophisticated economies like USA, U.K., Canada, Australia and New Zealand.

As part of the efforts towards a larger share of a global market, Yummy Foods Ltd. adopted Hazard Analysis Critical Control Point (HACCP) quality safety process from Denmark, especially applicable for food Industries. The company also initiated the process of getting ISO 9000 certificates. It had the state of the art machinery with automatic printing and packaging facilities. Their biscuit baking oven was the largest of its type in Asia. Apart from the factories in Mumbai and Bangalore, Yummy Foods Ltd. also had factories in Haryana and Rajasthan which were the largest biscuits and confectionary plants in the country. In all Yummy Foods had 7 manufacturing units and 51 manufacturing units on contract.

CONCEPT OF CMU

Contract Manufacturing Unit (CMU) was the outsourcing of a requirement to manufacture a particular product or component to a third party. Contract manufacturing enabled companies to reduce the level of investment in their own capabilities to manufacture, while retaining a product produced to a high quality, at a reasonable price, and delivered to a flexible schedule. Companies usually seek the services of a contract manufacturer because they want the benefits of having a manufacturing operation without the overhead cost. By outsourcing manufacturing to a company that had the knowledge and expertise to produce a quality finished product, a company could focus on

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other aspects of business, including branding, marketing, and selling their finished goods.

While there were numerous benefits associated with using a contract manufacturer, there were many other factors to be considered while searching and choosing the right contract manufacturer. When evaluating contract manufacturers, a customer needed to choose one that complied with the FDA's good manufacturing practices (GMPs) for food and dietary supplements. However, in case of Yummy Foods CMUs, all the parameters of quality control of raw material and products along with the manufacturing process parameters were closely supervised by company deputed special supervisors who were on the pay roll of Yummy Foods and deputed at CMU site to look after productivity, quality and safety norms.

The supervisors also acted as the coordinators for arranging required raw materials to CMUs. Yummy Foods Ltd. used Data Management System (DMS) and Material Management System (MMS) for their material management in which the company deputed supervisor/purchase manager who were required to make data entry of daily stock positions at CMUs. MMS directly connected the CMUs with centralized material procurement system located at Mumbai from where the supplier of materials to CMUs got information about the material requirement plans.

The above practices were similarly followed at Yummy Foods Ltd. CMU in Indore, Madhya Pradesh. Operation of the CMU was to convert the raw materials provided by Yummy Foods Ltd. into finished products of their specified standards. For this conversion process, CMU got payment on specified conversion basis. The ratio of raw materials used and waste percentage of conversion process was specified by Yummy Foods Ltd. But if consumption of materials or the waste generation exceeded the specified limit, then it was to be borne by CMU. CMU had to arrange manpower and all other production requirements other than raw material and

packaging items which were provided by Yummy Foods Ltd. Production of biscuits and confectionary required specialized technology and equipment. Other supporting processes operations were carried out by unskilled or semi skilled workers. Production at CMU was on 24X7 basis and in two shifts of twelve hours each. It was found that workers could not avail weekly holidays and also there was no concept of any paid holidays. Any worker who availed holiday for a day was penalized for his/her two days wages. There were no canteen facilities in the premises of CMU for the workers.

The hectic schedule, non-competitive wages and lack of basic facility multiplied the plight of the workers and created turmoil in their personal and family life. However, there were a few exceptions of internal promotion on performance basis from helper to shift supervisor post in hierarchy. In absence of full employee strength in shift, the increased workload was shared by the existing workforce without any incentives. There were many instances of violation of labor laws and human rights. Despite the employee turnover ratio being high, the CMU was least concerned as the operation required semi-skilled workers, which were readily available in the open market. As Yummy Foods Ltd. received products in time and as per their specified quality requirements, so they did not interfere into this matter in the CMU.

Questions

1. Keeping in mind the violation of labor laws and human rights, do you think that the stand taken by Yummy Foods Ltd. is justified?
2. What strategies do you suggest to overcome the labor turnover problem?
3. Suggest the ways to motivate the employees of the CMU to achieve higher levels of Productivity?
4. What initiatives government can take to put in order the employees problems?
5. Comment on the role of labor Union in the above situation.

COMPENSATION (VIII ED.) by Milkovich, George and Jerry Newman (2008). USA: McGraw Hill. pp 634, Price Rs. 575.

Compensation and reward system is one of the most challenging processes for human resource management department. It is greatly affected by the corporate and human resource strategies. High diversity of interests is observed amongst the promoters, management and the employees with regard to compensation. Promoters' view is conservative, management's is optimum and motivating, whereas, employees expect maximum compensation. At one hand employees' motivation, satisfaction and quality of life is directly connected with the levels of compensation and on the other hand, cost of production and organisational competence in the industry depends upon the level of compensation. Organizations providing higher levels of compensations also enjoy unique and high position of their brands. This also enables them to attract and retain talents. The book *Compensation* has eighteen chapters which run through six hundred and thirty four pages. First edition of the book was published in 1984. Since then, eight editions with nineteenth reprint in 2005 have been released, proving the merit of the book. Apart from first two chapters, which deal with the compensation models and strategic choices in United States and also across the globe, the book is divided into six parts.

These six parts are labeled as Internal Alignment: Determining the Structure; External Competitiveness: Determining the Pay Level; Employee Contributions: Determining Individual Pay; Employee Benefits; Extending the System and Managing the System respectively. Macro analysis in first two chapters are creating knowledge about the application of compensation models and considerations for internal and external conditions. The first part titled Internal Alignments: Determining the Structures is having four chapters from third to sixth. Chapter III is Defining Internal Alignments, which deals with strategic choices and organisational structures. It is micro aspect of organisational structure comprising of levels, differentials and consequences of structures in relation to compensation and overall human resource policies. It keeps abreast of latest

research pertaining employees' behaviour in relation to compensation and equity with others. The book outshines with uniqueness by including tournament theory and institutional models.

Job Analysis as the Chapter IV has all traditional and fundamental concepts with some novel approaches such as innovative approaches to optimize satisfaction to either party. The chapter also deals with job design, particularly in relation to reliability, validity, acceptability and usefulness of the jobs. Evaluating Work as Chapter V contains Job Evaluation with methods of job evaluation such as ranking, classification and point method in detail, as well as external market analysis and balancing chaos. Person Based Structures is the Chapter VI justifying with contribution and performance of employees on the basis of introducing skill based plans. It also deals with skill analysis with certification method and contemporary research on skill-based plans. Part two of the book is titled External Competitiveness Determining the Pay Level and has two chapters, Chapter VII and VIII, which describe the impact of competition on compensation, determining levels of compensation and pay structures. The situational and strategic aspects such as demand of the labour, marginal products and revenue are comprehensively dealt. The book describes competitive pay policies such as matching lead, lag, flexible and pitfalls of price policies.

Employee Contribution: Determining Individuals as third part has three chapters. They deal with individuals' contribution and reward, pay for performance and team based pay plans. They also comprehensively discuss employees' stock ownership plans (ESOPs), broad based option plan (BBOPs), performance unit and performance share. Performance appraisal sparingly apportions the role in the process of compensation management. Part four Employee Benefits dispensed with employer-employee preferences and value benefits. It also apportions administration policies and procedures for the benefits. Chapter XIII is crafted with the legal aspects, retirement saving plans, life insurance,

medical and related security benefits. Extending the System is the fifth part of the book which consists of three chapters from XIV to XVI. Chapter XIV is titled Compensation of Special Groups describes compensation for different groups such as supervisors, corporate directors, executives, scientists and engineers in high technology, sales force, contingent workforce and managerial personnel. Chapter XV talks about Union Role in Wage and Salary Administration and describes the impact of union in wage administration and alternative reward systems.

Chapter XVI is titled International Pay System it describes various cultures and their impact on pay system. This chapter distinguishes the book from other books because of its global scope. The chapter also focuses on employee involvement at managerial autonomy i.e., empowerment issues. It also highlights national pay system of Japan and Germany. It also discusses borderless pay system and elements of expatriate compensation and expatriate system etc. Managing the System is the sixth part and consists of two chapters XVII and XVIII. Chapter XVII it focuses on Governmental and legal issues in compensation. The intervening laws viz. Labour Standard Act 1938, Prevailing Wage Laws in America. Pay Discrimination, Equal Pay Act, Civil Rights Act 1964, Civil Rights Act 1991, Pay Discrimination and Dissimilar Jobs and Earning

Gaps. also dealt with comprehensively. Last chapter of the book Budgets and Administration discusses total pay models, labor costs, bottom up and top down approaches for salary control and the role of change agents in restructuring compensation functions. Undoubtedly the book is having a global scope in its applications as it comprehensively deals with almost all the domains of compensation and broadly with traditional as well as innovative aspects. Many of the innovative approaches, almost in all the chapters, make the book unique. International Pay Systems of chapter XVI is a unique feature, which is quite useful to Transnational and Multinational Corporations. Each chapter also takes account of current research findings.

For improving applicability of the knowledge each chapter possesses real world problems under the heading of Your Turn. The book is comprehensive thus, may be used as a reference book. Though from the point of view of the applicability in India the book has some limitations due to its American legal architecture.

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ELEMENTS OF MERCANTILE LAW by N.D. Kapoor (2009). Thirty First Edition, New Delhi: Sultan Chand and Sons Limited, pp vi + 1127, Price – Rs. 350.

Law in itself is a significant and detailed subject. Framing, executing and implementing rules and regulation is a constant process and requires great rigor. Mercantile law is one such category of law which is of great utility for individuals, business firms and the entire economy. It covers a vast arena from contract act, company law to specialized aspects of industrial law. N.D. Kapoor is a renowned name in the field of law and has a good hold on presentation of legal concepts. The book under review is the thirty-first edition and includes

mercantile law related acts with clarity and simplicity. The book has been divided into three volumes. *Volume One on Law of Contract* includes four parts. The introductory volume throws light on elementary aspects of law like – what is law, what are objects of law, what is the need for the knowledge of law, what is the need for the knowledge of law, sources and nature of mercantile law.

Part One titled General Principles of Law of Contract has twelve systematic drafted chapters.

Chapter 1 is titled *General Principles of Law of Contract*. It includes objectives of the law of contract, the Indian contract Act, 1872, essential elements of a valid contract, classification of contracts, and classification of contracts in English law. Chapter 2 titles *Offer and Acceptance* and it deals with meaning of offer and acceptance, communication process of offer, acceptance and revocation. Chapter 3 is titled *Consideration* and includes definition of consideration, its need, legal rules, etc. *Capacity to Contract* is chapter 4. This chapter defines who are the minors, persons of unsound mind, and, persons disqualified by any law in eligible to enter a contract. Chapter 5 is titled *Free Consent*. It provides insight into meaning of consent and free consent. The same chapter further deals with concepts of coercion, undue influence, misrepresentation, fraud and mistakes.

Chapter 6 on *Legality of Object* throws light on situations when consideration/ object is categorized as unlawful. Chapter 7 is on *Void Agreements*. It discusses meaning of void contracts and void agreements along with the concept of restitution. Chapter 8 is titled *Contingent Contracts*. This chapter focuses on rules regarding contingent contracts, the difference between a wagering agreement and a contingent contract. Chapter 9 is on *Performance of Contract*. The chapter provides insight into what is an offer to perform, which contracts need not be performed, who should perform the contracts, time and place of performance, etc. Chapter 10 is titled *Discharge of Contract*. This lengthy chapter defines various modes of discharge of contracts. Chapter 11 is on *Remedies for Breach of Contract*. The chapter deals with various possible alternates available for breach of contract such as – rescission, damages, specific performance, injunction, etc. Chapter 12 is on *Quasi Contracts* and describes its meaning and types.

Part Two of the book deals with Specific Contracts which includes nine exhaustive chapters. Chapter 1 of this part is on *Indemnity and Guarantee*. The chapter discusses meaning and contracts of indemnity and guarantee, the extent of surety's liability, kinds of guarantee, rights of surety, discharge of surety, etc. Chapter 2 on *Bailment and Pledge* deals with the meaning

and classification of bailment, duties and rights of bailor/ bailee, laws relating to lien, finder of goods, termination of bailment. The chapter concludes with meaning of pledge, difference between pledge and bailment. Chapter 3 is on *Contract of Agency*. This chapter defines an agency and principal. It lists the norms for creation of agency, classification of agents, delegation of authority, relaxation of principal and agent, relaxation of principal with third parties and other minute details. Chapter 4 of this part is further sub-divided into five smaller parts. Chapter 4i is on *Sale of Goods*. It details about the formation of contract of sale, its subject matter, price consideration, time element and related issues. Chapter 4ii is on *Conditions and Warranties*. It discusses various kinds / types of conditions and warranties and the concept of 'caveat emptor'. Chapter 4iii is on *Transfer of Property*. The chapter throws light on meaning of property, possession of risk, passing of property, kinds of goods, and sale by non-owners. Chapter 4iv titles *Rights of an Unpaid Seller*. The chapter defines who is an unpaid seller, what are his rights, remedies for breach of contract of sale and other related aspects.

Chapter 5 is also sub-divided into three parts. Chapter 5i is on *Nature of Partnership*. It discusses the meaning and definition of partnership, formation of partnership, test of partnership, etc at length. Chapter 5ii is on *Relations of Partners*. This chapter provides insight about relations of partners to one another and to third parties, property of the firm, types of partners and reconstitution of a firm. Chapter 5iii is on *Dissolution of Firm*. The chapter explains different ways of dissolving a firm, it throws light on the duties, rights and liabilities of a partner on dissolution. Chapter 6 of this part is sub-divided into ten parts. Chapter 6i titles *Negotiable Instruments*. The chapter defines a negotiable instrument and its types. Chapter 6ii is on *Notes, Bills and Cheques*. The chapter briefly defines all the three and discusses some related aspects at great length. Chapter 6iii is on *Parties to a Negotiable Instrument*. It includes details regarding capacity of parties, parties to negotiable instrument, holder and holder in due course and liabilities of parties. Chapter 6iv is on *Negotiation*. The chapter deals with transfer by negotiation, transfer by assignment, endorsement, instrument

obtained by unlawful means. *Chapter 6v* is on *Presentment of a Negotiable Instrument*. The chapter throws light on various modes of presentment i.e., for acceptance, for sight, for payment. *Chapter 6vi* is on *Dishonour of a Negotiable instrument*. It includes the meaning, notice of dishonour, procedure of noting and protesting rules as to compensation, etc. *Chapter 6vii* is on *Discharge of a Negotiable Instrument*. The chapter defines discharge of an instrument and discharge of a party. *Chapter 6viii* is on *Rules of Evidence* and refers to basics of estoppel and other international laws. *Chapter 6ix* is on *Hundis* and its kinds. *Chapter 6x* is on *Banker and Customer*. The chapter defines the role of these two, their legal relationships, protection of paying party, etc.

Chapter 7i is on *Arbitration*, it highlights contents of an arbitration agreement, its advantages and disadvantages, powers of judicial authority, composition of Arbitrate Tribunal award and appeals. *Chapter 7ii* is on *Conciliation* and the chapter focuses on issues related to commencement of conciliation proceedings, settlement agreement, termination of conciliation proceedings. *Chapter 8i* is titled *Law of Insurance*. It discusses concepts related to contract of insurance, fundamental elements of insurance, premium, re-insurance and double insurance. *Chapter 8ii* is titled *Life Insurance*. The chapter deals with elements of life insurance contract, insurable interest, rights of insurer to avoid life policy, types of life insurance policies, assignment and nomination. *Chapter 8iii* is titled *Fire Insurance* and defines elements of the contract of fire insurance, average clause in a fire policy, insurable interest, fire and loss by fire, rights to insurer, types of fire policies and assignment. *Chapter 8iv* is on *Marine Insurance* and contains details about the contract of marine insurance, disclosure and representation, principles of marine insurance, marine policy, warranties, voyage, premium, losses and other such minute issues. *Chapter 9i* is on *Carriage of Goods*. The chapter includes basics of carriage by land, classification of carriers, types of goods and carriage by rail. *Chapter 9ii* is on *Carriage by Sea* and emphasizes on contract of affreightment, charter party and sea transport related documents. *Chapter 9iii* is on *Carriage by Air*.

Part Three of the book is on Law of Insolvency. *Chapter 1* is titled *Law of Insolvency* deals with nature of insolvency proceedings, jurisdiction of insolvency courts, who can be adjudged insolvent, acts of insolvency, stages of insolvency, etc. *Chapter 2* is titled *From Petition to Adjudication* discusses the procedure after presentation of petition, order of adjudication, effects of insolvency on antecedent transactions and schemes of composition and arrangement are at length. *Chapter 3* is titled *Property and Debts of Insolvent*. This chapter describes details regarding property of insolvent, debts of insolvent, distribution of insolvent property, declaration and distribution of property, etc. *Chapter 4* is titled *Discharge of Insolvent*. The chapter provides insight about application for discharge, refusal of unconditional discharge, small insolvencies, appeals and penalties.

Part Four is titled Latest Laws. *Chapter 1* of this part is titled *The Consumer Protection Act, 1986*. It defines the various consumer protection bodies functioning in India along with their roles and responsibilities. *Chapter 2* is titled *The Foreign Exchange Management Act, 1999*. The chapter defines basic concepts and issues related to forex management in India like – regulation and management of forex, authorized person, contravention and penalties, adjudication and appeal, etc. *Chapter 3* is titled *The Information Technology Act, 2000*. The chapter focuses on issues related to information technology and related laws. It provides a great deal of information on digital signature and electronic signature, electronic governance, attribution, acknowledgement and dispatch of electronic records, regulation of certifying authorities, duties of subscribers, penalties, compensation and adjudication norms, offences, etc. *Chapter 4* is titled *The Competition Act, 2002*. This chapter provides insight about prohibition of certain agreements, abuse of dominant position, Competition Commission of India, duties, powers and functions of commission, duties of Director General, penalties, competition advocacy and related concepts.

Volume Two is titled Company Law. This volume is further divided into sixteen chapters. *Chapter 1* is titled *Nature of Company*. It defines a company, its characteristics, company law in

India, how is company different from a partnership, etc. at length. *Chapter 2* is titled *Kinds of Companies*. This chapter simply classifies companies on basis of – incorporation, liability, number of members, control and ownership. *Chapter 3* is titled *Formation of a Company*. It provides details regarding electronic filing of form, incorporation of company, certificate of incorporation, promoter and related aspects. *Chapter 4* is titled *Memorandum of Association*. It discusses fundamental documents, contents of memorandum and alteration of memorandum. *Chapter 5* is on *Articles of Association*. The chapter throws light on contents of articles, alteration of articles, relationship and difference between articles and memorandum, legal effects of the two, etc.

Chapter 6 is titled *Prospectus*. It briefs about meaning of registration, shelf prospectus, draft offer document, contents of prospectus, offer for sale, misstatements in prospectus and their consequences. *Chapter 7* is titled *Membership in a Company*. The chapter provides insight about members and shareholders, procedure for becoming a member, their eligibility, cessation of membership and defines the rights and liabilities of members. *Chapter 8* is titled *Share Capital*. The chapter discusses about kinds of share capital, alteration of capital, reduction of capital, re-organisation of capital and voting rights. *Chapter 9* is titled *Shares* and defines stocks and shares. It then deals with types of shares, procedure for allotment, SEBI guidelines for allotment and issue of shares, over subscription, transfer of shares, forfeiture of shares and many more important aspects. *Chapter 10* is titled *Company Management*. This chapter discusses about the role of director/s in management of a company. It highlights aspects like appointment, positions, number of directorships, their disqualifications, their remuneration, duties and powers, their liabilities, etc. at length.

Chapter 11 is titled *Meetings and Proceedings*. The chapter briefly discusses the procedure of general meetings, requisites of a valid meeting, procedure for voting and poll and resolutions. *Chapter 12* is titled *Borrowing Powers, Debentures and Charges*. The chapter deals with basics of debentures, their types, mortgages, ultra-vires borrowing, and registration of charges. *Chapter*

13 is titled *Accounts and Auditors*. The chapter emphasizes on significance of accounting and book keeping from legal point of view. It further defines accounts, statutory books, annual accounts and balance sheets, procedure for filing of accounts with the registrar. The chapter concludes with appointment criteria for auditors, rights, powers and duties of auditors. *Chapter 14* is titled *Prevention of Oppression and Mismanagement*. This chapter highlights the provisions that prevent opposition and mismanagement in a company. It also enumerates the powers of Company Law Board and central government in this regard. *Chapter 15* is titled *Compromises, Arrangement and Reconstruction*. It focuses on the concept of compromise, reconstruction and amalgamation of companies in national interest. The last chapter of this volume titles *Winding up*. It defines the meaning of winding up, various modes of winding up a company, winding up by court, powers of court, consequences of winding up, winding up procedure and other related minute details.

Volume Three deals with Industrial Law. This volume has fifteen chapters divided into six sub-parts. Part One is titled Working Conditions. *Chapter 1* is titled *The Factories Act, 1948*. The chapter provides a very detailed view about meaning of factory, approval, licensing and registration of factories, the inspecting staff. Health, safety, hazardous processes and welfare related issues are specially highlighted in this chapter. The chapter also enumerates provisions and procedures regarding employment of young persons, women, leave provisions with wages and penalties. Part Two is titled Social Security. *Chapter 2* is titled *The Workmen's Compensation Act, 1923*. This chapter provides insight about scope and coverage of the Act, rules regarding workmen's compensation, amount and distribution of compensation and enforcement of the act. *Chapter 3* is titled *The Employee's State Insurance Act, 1948*. The chapter lays emphasis on applicability of the Act, Employee's State Insurance Fund, contributions and benefits, other schemes under this Act and adjudication of disputes and claims. *Chapter 4* is titled *The Employee's Provident Fund and Miscellaneous Provisions Act, 1952*. This chapter provides insight on applicability of the Act, Employee's Provident Fund Scheme (1952), Employee's Pension

Scheme and Fund (1995), Employee's Deposit Linked Insurance Scheme and Fund (1976), administration of all these schemes.

Chapter 5 of this volume is titled *The Payment of Gratuity Act, 1972*. It defines payment, forfeiture, determination, recovery of gratuity, norms related to nomination, penalties and offences. Chapter 6 is titled *The Maternity Benefit Act, 1961*. The chapter very briefly highlights scope and coverage of the Act. Chapter 7 is titled *The Payment of Wages Act, 1936*. The chapter explains the extent, applicability and enforceability of the Act, rules for payment of wages. Chapter 8 is titled *The Minimum Wages Act, 1948*. The chapter defines the object of the Act, procedure for fixation and revision of wages, offences and penalties, etc. Chapter 9 is titled *The Industrial Disputes Act, 1947*. This lengthy chapter deals with objects and extent of the Act. The chapter further enumerates procedure for settlement of Industrial disputes, and authorities under this Act, procedure, powers and duties of authorities, reference of disputes to boards, courts, tribunals, voluntary reference, reference to national tribunal, award and settlement, strikes and lockouts, lay offs and retrenchments. Chapter 10 is titled *The Industrial Employment (Standing Orders) Act, 1946*. The chapter focuses on object, scope and application of the Act.

Part Five titles Worker's Organisation. Chapter 11 is on *The Trade Unions Act, 1926*. It deals with Trade Unions, their registration, cancellation and appeal procedures. The chapter also enumerates rights, duties, privileges and liabilities of a registered trade union and other related issues. Part Six titles Bonus and Chapter 12 is titled *The Payment of Bonus Act, 1965*. The chapter defines bonus, discusses eligibility, dis-qualification for bonus, determination of bonus, penalties and offences liable under the Act. The book concludes with Part Seven on Miscellaneous Acts. Chapter 13 is titled *The Apprentices Act, 1961*. This chapter

defines with the meaning of Apprentice, Apprentices and their training, obligations of employers, penalties and related offences. Chapter 14 is titled *The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959*. The chapter throws light on application and scope of the Act, notification related to vacancies, etc. Chapter 15 is titled *The Collection of Statistics Act, 2008*. The chapter deals with collection of statistics. It briefly lists provisions for disclosure of information, restrictions on use of information, power in respect of core statistics, penalties and offences.

The book under review is extremely informative, crisp and concise as regards aspects of Mercantile Law. The author has very precisely drafted the chapters and has provided a lot of review questions and exercises at the end of each chapter. As compared to its previous editions, this edition has a lot of new topics which are briefly discussed. Easy language and simple explanation are key strengths of the book. But, at the same time, the book does have some limitations regarding its poor printing and a number of grammatical and spelling mistakes. Two parts namely Part Three and Four are missing in the Volume Three. They do not find any mention in the chronology of chapters. Certain chapters exhibit too much of information and thus creating a chaos for readers of disciplines other than law. In spite of this, the author needs to be appreciated for compiling these different and tedious acts in this (31st) edition. The book can be referred for insights into company law and contract act by management students (BBA and MBA). It is extremely helpful for students of law, at both under graduate and post graduate level.

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HUMAN RESOURCE DEVELOPMENT by Naga Raju Battu (2011). New Delhi: APH Publishing Corporation, pp. 272, Price: Rs 195/-.

In the global environment of competition, the organizations have increasingly realized the importance of human resources for sustainable growth and success. The rise or fall of any organization depends upon their people capabilities, skills and motivation. Thus, as rightly mentioned by the author, human resource is a critical factor in the economic development of any country and its institutions. In the preface, author highlights the importance of human resource development as the primary process for achieving the full potential of individual and organizational growth over time. This book is a result of empirical study done on HRD climate in a private sector organization in India.

In this book, author has emphasized the importance of generating congenial HRD climate before carrying out HRD plans as it accelerates HRD process and self development of employees. The author in this book has presented his research on HRD Climate in Agrigold, an agro based emerging private sector unit in Andhra Pradesh. The aim of the present study is to assess the quality of HRD climate in the organization under study. Thus, the whole book is written from a researcher's perspective. Author has organized his research into six chapters followed by bibliography and index.

The Chapter I lays down the conceptual framework for HRD. It begins with a brief introduction stressing the importance of human resources for the organizations. It presents the current problems, challenges and opportunities in HRM due to changing demographics of the workforce, fast changing technology and unpredictable business environment. It differentiates HRM from personnel management and highlights the significance and changing role of HRM. He also gives the credit to proper HRM in effectively managing the change in the organizations. The author then gives an in depth description of the concept of HRD. He argues that it is only competent and motivated people who can make things happen so the organizations should continuously strive towards ensuring enhanced dynamism, competency,

motivation and effectiveness of its employees. The author beautifully describes the history and the trends in the evolution of HRD. The chapter also throws light on the aims, goals, need, benefits, constraints, philosophy, future and role of HRD in the economic development of a nation.

Chapter II is titled Problem and Methodology and presents a review of literature on HRD and HRD climate. It also describes the three dimensions of HRD climate i.e., general HRD climate, OCTAPACE culture and implementation of HRD mechanisms. The concept of HRD climate is beautifully discussed right from its origin in 1980's by T.V. Rao and Abraham to its present state. Various studies on HRD climate in India are also sequentially presented to give better insights and understanding of the concept. The chapter then outlines the research methodology followed in the study. The research design, objectives, sampling, data collection and limitations of the study are discussed in detail followed by the reference section. The survey used the 38 item HRD climate survey instrument developed by T.V. Rao in 1986 using a five point scale.

Chapter III of the book gives a brief overview of the organization under study i.e., Agrigold farms Limited. It presents the various divisions of the organization, the departmental structure, future projects, publications, market segment and the product selling plan of the company. Chapter IV is titled as Human Resource Developmental Climate in Agri-Gold. The chapter describes the concept of HRD and that too exactly in the same way as it has been done in previous chapters. It again describes the study which has already been discussed in Chapter II.

Chapter V presents the analysis of the perceptions of sample managers, supervisors and workers on the human resource development climate prevalent in the organization under study. It presents the item wise analysis of the responses and reports the mean score of each of the item. Data has also been presented graphically for better understanding. The mean score of the

HRD climate in the organization was reported to be average (3.39) leaving ample scope for improvement. Chapter VI embodies the conclusions based on the data analysis and interpretation made in the last chapter. Based on the analysis author gives some important and useful suggestions to improve the various dimensions of HRD climate in the organization under study. Data is analyzed on the basis of mean scores only. Some new statistical techniques would have been applied to add more value to the research.

This book has undoubtedly contributed much to enhance knowledge in the area of human resource development especially, for the researchers. However, the language used is not very good. Grammatical and typing errors are in abundance. There has been unnecessary repetition of some concepts. Some of the

sentences are framed so vaguely that it is difficult to construct a meaning out of it. The task of proof reading seems to be weak. Thus, there is ample scope for improvement in the successive editions of the book. Despite certain weaknesses, the book is recommended to the scholars and students of HR as it presents a useful research framework in the field of human resource development.

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INDIAN FINANCIAL SYSTEM by H.R. Machiraju (2010). New Delhi: Vikas Publishing House Pvt. Ltd., Fourth Edition, pp.458+xvi, Price Rs 295.

The Indian Financial System comprises of intermediaries, the markets, the instruments and the institutional framework along with its associated practices. The advent of liberalization in 1992-93 integrated the different components of financial markets like the foreign exchange, money and the capital markets and facilitated greater liquidity. This, in turn, led to an effective implementation of the monetary policy, capital market policy and the management of foreign exchange.

The liberalization of the financial markets featured deregulation of interest rates and removal of quantitative restrictions. This has been the hallmark of the effort undertaken by the central bank to manage short term interest rates to improve the take-off of credit and investment in the economy. The ultimate aim of the financial system is not merely to improve efficiency in allocation of given resources, but, to promote growth. Equitable economic growth can be promoted by financing viable activities which add to output either directly or through self groups. The resilience of the financial system

depends on how well we maintain and reduce the government deficit and allow the private organizations to garner resources for their growth through well qualified means.

The book under review on Indian Financial System by H. R. Machiraju is the Fourth Edition of a fairly successful book which had its inception in the year 2000 and was revised in the years 2002 and 2007. According to the author, the book differs from its previous editions in terms of the wide-ranging assessment of the financial sector and the International financial crisis, Basel II guidelines, microfinance and studies focusing on the demise of investment banks in the US. A note on the role of capital market in project finance has been included in the current edition.

The book consists of 19 chapters, 71 tables, 7 figures, 8 statements and 1 chart. The chapters are ably supported at the end with questions and further reading references. Though clear lines of demarcation is not present in forms of Part I, Part II, etc; still, we can divide the given chapters

in four broad parts. Part I consisting of Chapter 1 and 2 is focused on the introductory aspects of Indian financial system. Part II consisting of chapters 3 to 10 is focused on the banking scenario in India whereas, Part III consisting of chapters 11 to 18 has the different markets and their regulation in its purview. Part IV consists of chapter 19 and is focused on the public financial administration in India.

Chapter 1: An Introduction to the Indian financial system, provides an overview of the financial system and the markets. It also talks about the international financial crisis of 2008 and its affect on India. Chapter 2 is titled savings and financial intermediation, covers savings in Indian context and payment and settlement system.

Chapter 3 is commercial banking which takes us through risk management in banking, their classifications, capital adequacy, SLR, CRR, prudential norms in banking and reforms. Chapter 4 focuses on Reserve Bank of India and talks about Central Banking and provides an introduction to the central bank of India and its functions. Chapter 5 focuses on regional rural banks; Chapter 6 is on Cooperative Credit, and Chapter 7 is development banking and adequately cover the social and development banking segments, viz., rural banking, co-operative banking and development financial institutions. The definition, norms and regulatory framework for NBFCs is covered in Chapter 8 which based on Non-Bank Financial Companies. The downfall of investment banking in US is the major topic covered in Chapter 9 entitled Investment Banking. This chapter also differentiates between the role of merchant banking and investment banking. The Chapter 10 on merchant banking, talks about the origins of merchant banking in India, definition, regulation and their functions. A note on general obligations and responsibility of merchant bankers is also included in the chapter.

Chapter 11 is on mutual funds and is a treatise on the Mutual Fund sector in India. Covered in this chapter are the types of mutual funds, returns, accounts, regulation, structure, performance evaluation and guidelines for their operations. The most exhaustive and longest chapter in the book is Chapter 12 i.e., SEBI and

regulation of primary and secondary markets. In addition to a thorough coverage of SEBI, its origin and role; the chapter has guidelines on almost all the operations and instruments in the primary and secondary market. Chapter 13 deals with money markets and provides a general reading on money market, its instruments and trading. Chapter 14 is based on foreign exchange markets and is another meticulously planned chapter dealing with foreign exchange rates and their determination, spot and forward markets in India, cross rates, risk and hedging, etc.

Chapter 15 on primary markets, provides an insight into the different instruments viz., equity shares, preference shares, debentures, etc., their credit rating and the public issue process. A note on venture capital is included in the chapter. Chapter 16 is on secondary market: stock exchanges their origins, their functions, regulations, trading and surveillance. A brief introduction about BSE, NSE, OTCEI and the depository system is also included in the chapter. Chapter 17 is about foreign investment and its regulations and talks about the flow of FDI into India via FIIs and NRIs while the Chapter 18 accesses International Capital Markets, deals with external commercial borrowings and syndicated loans. Chapter 19 is on the Indian Fiscal System and is the last chapter of the book which provides an insight into the financial administration of public finances by the government through the mechanism of finance commissions. The thirteenth finance commission (2010-2015) has its role cut out in the financial system, that of deciding between the share in national taxes of the government of India and the state governments. It has also to take into consideration the impact of introduction of Goods and Services Tax (GST) in India. Lastly, the chapter discusses the annual budget of the Government.

The book is a worthy competitor to the leading book in the subject – Indian Financial System by M.Y. Khan (2007), Tata McGraw Hill Publishing Company Limited, New Delhi, ISBN: 0-07-061643-4 due to its exhaustive coverage of the subject at hand. However, it lacks summary at the end of the chapters which is sorely missed. It also lacks detailed coverage on issues such as insurance, derivatives markets and commodity

markets. Though the book covers almost everything else in the Indian financial system, what it further lacks is comprehensive numericals and their solutions. Real life cases from the Indian financial scenario, if included, would have made the book more interesting for its readers. Overall, the book is a lucid work and

is worthy of being a text in the subject of Indian financial system.

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INDUSTRIAL RELATIONS AND LABOUR LAWS by (2009). New Delhi: Sultan Chand and Sons, pp 328, Price, Rs. 250.

With technological advancements, factory system gradually started emerging. The owners provided machinery, means of production and premises and the workers supplied their labour. This led to the emergence of two distinct classes on the industrial scene, namely the capitalist class and the working class. The capitalist class became more powerful as it provided the most important input for production. With the Industrial revolution, in Europe and its subsequent impact on the entire globe, the scenario changed considerably. The government came in the scene for regulating the working conditions of employees who had little bargaining power. Further, the changes in the techniques and methods of production, work methods, supply of better skilled workers etc. changed the complexion of industrial relations considerably. The book under review has two parts viz., Part A (Industrial Relations), Part B (Labour Laws).

Part A consists of nine chapters which discuss issues like industrial relations, trade unions, labour welfare, worker participation to name a few. Chapter I, talks about Industrial Relations and Industrial Disputes in India, highlights the meaning, nature, approaches to Industrial Relations (I.R.). In this chapter, conditions for good industrial relations have been discussed along-with the causes and effects of poor industrial relations. I.D. Act, 1947 has been discussed in context of meaning of Industrial Disputes and forms of disputes. In this chapter history of labour disputes in India, causes of disputes, and various methods for the prevention and settlement of Industrial Disputes have been stated. The meaning consequences of illegal

strike and lockout have been also mentioned. Layoff, retrenchment have been discussed under I.D. Act, 1947. Three-tier machinery for the settlement of labour disputes by National Commission on Labour is also included in the chapter.

Chapter II, discusses Trade Unions and throws light on definition, nature scope of a trade union, trade union theories, need for trade unions, functions of trade union. Trade union structure, historical development of trade union in India, obstacles in the growth of strong trade unionism and Trade union Act, 1926 has been discussed. Author has highlighted the future of trade union in India and ILO's objectives and functions in the chapter. Chapter III deals with Collective Bargaining. It throws light on meaning, structure, benefits, and conditions essential for success of Collective Bargaining (CB) and how CB works. This chapter discusses the qualities of negotiating teams, types of negotiating procedures and scene of collective bargaining in India. Chapter IV, Grievance, highlights the meaning, causes, and effects of grievances. This Chapter has presented machinery for handling grievances and model grievance procedure.

Chapter V, discusses Employee Discipline and explains the meaning, causes of indiscipline and essentials of good disciplinary system. This chapter also discusses kinds of punishment, Indian law on punishment which is covered under the industrial Employment (Standing Orders) Act, 1946, Payment of Wages Act, 1936, I.D. Act, 1947. Chapter VI consists of Employee Compensation. It highlights characteristics of

good compensation plan, factors affecting wages at the micro level, meaning and major steps in job evaluation. The author has also discussed methods of job evaluation in detail and elaborated incentive compensation. Under incentive compensation author has highlighted kinds of incentive compensation plans. In this chapter, requisites for the success of an incentive plan, behavioural performance management, wages in India, National Wage Policy have been mentioned along-with present position of salaries in India. Certain factors have been mentioned on which executive compensation is based.

Chapter VII, Labour Welfare and Social Security, presents meaning, principles, types of labour welfare. This chapter also describes causes, consequences of accidents and new techniques in accident prevention. Benefits of counselling and mentoring along-with labour welfare in India have been mentioned in this chapter. Factories Act, 1948, E.S.I. Act, 1948, E.P.F. and Misc. Provisions Act, 1952, The Maternity Benefit Act, 1961, The Payment of Gratuity Act, 1972, The Industrial Disputes Act, 1947 have been discussed briefly. Chapter VIII, is on Worker Participation in Management. It presents meaning of worker participation, methods of worker participation in management (WPIM) in India including WPIM in Tata Steel. This chapter also highlights the participation of workers in Management Bill, 1990 with its criticism, alternative approaches to participation with their merits and demerits.

The next chapter, Chapter IX, discusses Industrial Relations in Great Britain and U.S.A. It talks about the growth, regulation of terms and conditions of employment, collective bargaining, conciliation, voluntary arbitration and adjudication etc. in Great Britain and U.S.A.

The second part of the books namely Part B consists of fifteen chapters. It talks about Factories Act, workmens compensation Act, EPF Act to name a few.

Chapter I, elaborates The Factories Act, 1948 its meaning and definitions of various terms of the Act. It highlights approval, licensing and registration of factories, notice by occupier, general duties of the occupier and manufacturers, appointment, powers of

Inspectors along-with appointment and duties of certifying surgeons. In this chapter, author has discussed health, safety and welfare provisions in detail and working hours of adults, spread over, night shifts, overlapping shifts, extra wages for overtime, notice of periods of work for adult workers, holidays. This chapter also covers employment of young persons and women, annual leave with wages, special provisions, penalties and procedure.

Chapter II, covers the Workmen's Compensation Act, 1923. It throws light on scope and coverage of the Act. This Act also discusses rules regarding workmen's compensation, list of occupational diseases, and amount of compensation for death and permanent total, permanent partial disablement and temporary disablement. This chapter also discusses method of calculating monthly wages, distribution of compensation, notice and claim and miscellaneous sections of the Act. Chapter III discusses Employees' State Insurance Act, 1948, highlights scope, exemptions, definitions and administration of the scheme. This chapter also discusses finance and audit, contribution, machinery for recovery of arrears and benefits under the Act. Adjudication of disputes and claims, appeals, penalties, miscellaneous provisions are the part of this chapter.

Chapter IV, focuses on the Employees' Provident Funds and Miscellaneous Provisions Act, 1952. It throws light on the application of the Act, definitions, Employees' Provident Fund Scheme (E.P.F.), 1952, Employees' Pension Scheme and Fund, 1995, Employees' Deposit Linked Insurance Scheme and Fund, 1976 in brief. In this chapter, clarification pertaining to contributions and contents about central board, executive committee, powers of inquiry officer, membership and qualifications of a Presiding officer have been mentioned. Appeals to tribunal, orders of tribunal, recovery of moneys by employers and contractors, protection against attachment, priority of payment of contributions over other debts, powers of inspectors including penalties, offences, and miscellaneous provisions have been elaborated in this chapter.

In Chapter V, the authors explain the payment of Gratuity Act, 1972, its highlights,

scope and definitions. The author has also explained rate of gratuity, maximum gratuity, exemptions, forfeiture of gratuity, compulsory insurance, protection of gratuity, nomination, determination and recovery of gratuity. In this chapter, appointment of inspectors, powers of inspectors, penalties and offences under payment of Gratuity Act, 1972 have been mentioned. Chapter VI talks about the Maternity Benefit Act, 1961, and throw light on scope, coverage of the Act. This chapter highlights definitions, maternity benefit, leave and nursing breaks, powers and duties of inspectors along-with miscellaneous provisions, penalties and offences.

Chapter VII, consists of the payment of Wages Act, 1936, it highlights, extent of application and definitions of this Act. Author has explained rules for payment of wages, deductions from wages, maintenance of registers and records, powers and functions of inspectors. In this chapter, contents about claims, appeal, miscellaneous provisions have been mentioned. Chapter VIII, focuses on the Minimum Wages Act, 1948, presents definitions, sections related to fixation and revision of wages, minimum rates of wages, procedure for fixing and revising minimum wages, advisory and central advisory board and safeguards in payment of minimum wages.

Chapter IX, the author discusses the Industrial Disputes Act, 1947, objects, extent, definitions of the Act. This chapter also explains authorities for settlement of industrial disputes and procedure, powers and duties of authorities. In this chapter author has explained references of disputes to boards, courts, and voluntary reference, award and settlement, and sections related to strikes, lockouts, lay-off and retrenchment, including penalties and miscellaneous sections. Chapter X, discusses the Industrial Employment (Standing Orders) Act, 1946 and presents object, scope, definitions of this chapter. Author has explained procedure for submission of draft standing orders, procedure for certification of standing orders, payment of subsistence allowance, powers of certifying officers and appellate authorities along-with miscellaneous sections.

Chapter XI, talks about the Trade Union Act, 1926, elaborates definitions, registration of the trade union, rules of trade union, cancellation of registration and appeal, rights and privileges of a registered trade union, duties and liabilities of a registered trade union. In this chapter, amalgamation and dissolution of trade unions, regulations, penalties have been mentioned. Chapter XII, highlights the Payment of Bonus Act, 1965, throws light on object, application, definitions, determination of bonus under this Act. Author has explained computation of gross profits of a banking company and other cases, allocable surplus, special provisions with respect to certain establishments. Author has mentioned powers of Inspectors, penalties, offences, miscellaneous sections in this chapter.

Chapter XIII, talks about the Apprentices Act, 1961, discusses scope, coverage and definitions of the Act. In this chapter nature of apprenticeship contract, qualifications for being engaged as an apprentice, contract of apprenticeship, period of apprenticeship training, number of apprentices for a designated trade have been mentioned. Author has explained process of termination of apprenticeship contract, health and safety of apprentices, hours of work, overtime, leave, holidays of apprentices and settlement of disputes. Obligations of employers and apprentices, authorities under this Act, penalties, offences, miscellaneous sections are a part of this chapter. Chapter XIV is about the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959. It covers topics like application, definitions notification of vacancies, employer to furnish information and returns, penalties and miscellaneous sections in the chapter. Chapter XV, consists of the Collection of Statistics Act, 2008, ponders light on objects and reasons, definitions, collection of statistics, disclosure of information in certain cases and restrictions of their use, offences and penalties and miscellaneous sections.

The author has been successful in presenting extensive material in the field of Industrial Relations and Labour Laws. The book covers industrial relations area in an appropriate manner. It provides a thorough understanding of the concepts of industrial relations and labour

laws which are applicable in Industry. The author has tried to cover the topics on Industrial disputes, trade union, collective bargaining, workers' participation in management, The Factories Act, 1948, The Workmen's Compensation Act, 1923, The E.S.I. Act 1948, The Payment of Gratuity Act, 1972, etc. Objective type questions have been given in chapters which are useful for competitive exams also. However, few topics have been discussed very

briefly and some topics could have been further elaborated. Cases also find their presence in only few chapters. Overall however the book is useful for undergraduate and post-graduate students as well as researchers.

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KNOWLEDGE MANAGEMENT by Thomas Erickson (2009). New Delhi: Global Vision Publishing House, pp. 344 . Price Rs.2000.

Like water the growing tide of data can be viewed as an abundant, vital and necessary resource. With enough preparation, we should be able to tap into that pool and ride the wave by using new ways to utilize raw data into meaningful information. That information, in turn, can then become the knowledge that leads to wisdom. Knowledge Management (KM) an emerging trend comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. The book under review provides a wide coverage and sound understanding of the knowledge and its use in various segments of organization. The author has nearly touched every aspect related to knowledge and shown how a company can have better expertise than its competitors if knowledge is utilized in a proper way. The book is divided into two sections. Section I deals with systems and strategy in Knowledge Management and includes six chapters (2-7). Section II deals with planning and applications in knowledge management and includes five chapters (8-12). Chapter 1 is the Introduction part.

Chapter 2 defines the basic concepts of knowledge. The idea that knowledge has value is ancient. In the first century A.D. Juvenal (55-130) stated "All wish to know but none wish to pay the price". After that many authors have defined knowledge in their own ways. It was Firestone who related knowledge to business when he noted that "Thought, not money is the real business capital". This chapter describes

knowledge market, knowledge organisations, knowledge services, organisational relationship and certain aspects related to KM like schools of thought in KM, dimensions of knowledge, knowledge stages and the emerging perspectives related to what is data, information, knowledge and wisdom. It also deals with developments in management information systems like electronic data interchange systems, image processing systems, decision support systems, executive information systems etc. and the relationship of OLAP systems to a KMS environment using the concept of data mining tools.

Chapter 3 focuses on knowledge sharing culture, basic types of knowledge in a KMS environment, operational knowledge, knowledge acquisitions and usage, problem finding process, knowledge bases, intranets and extranets, knowledge extraction tools, knowledge management software, data mining software etc. Knowledge is considered as one of the most important aspect now-days. On the technology front, the importance given to knowledge resource is exemplified by the emergence of a special type of information system-knowledge management System (Alavi and Leidner 2001). Problem finding techniques which includes creative process, brainstorming, synectics, accurate problem definition and idea generators have also been described in detail. The real example of various industries like coopers and lybrand, 3M, London based British petroleum where knowledge is utilized to build intellectual assets has also been discussed.

Chapter 4 is on knowledge system implementation in organisations. The ways to implement knowledge system in organizations include choosing the appropriate knowledge orientation, cost justification, selecting appropriate software, factors for evaluating the KM software, search engines, decision tree, joint and rapid application development (JAD & RAD) and implementing successful KMS. This chapter has described the cost justification for KMS where managers, staff and technical workers receive the knowledge related to new patterns, trend and projections that may lead to new ways of thinking and better decisions.

Chapter 5 defines the concepts of open system architecture, databases-relational, object oriented and multidimensional, data marts, data warehousing, knowledge mining or knowledge discovery and current data mining methods. This chapter has an insight of databases, their types and how they are being managed. Data marts can provide a starting point for decision makers to discover knowledge that they can use throughout an organisation. Data warehouses help the organisation to become more competitive, helps company personnel to identify hidden business opportunities, improves productivity and customer responsiveness to company promotions.

The companies using data warehouse as strategic weapon include Wal Mart, MCI, MasterCard, Bank of America, R&V Insurance in Germany. Data mining has also been described as knowledge held within a company's database by revealing patterns and trends that can suggest improved performance in terms of greater customer satisfaction, higher quality products, savings and profits. Data Mining methods like neural networks, CART, K-nearest neighbor, discriminant analysis and logistic regression with their advantages and limitations have also been discussed and the current data mining methods which are employed are being highlighted.

Chapter 6 deals with networking environment to share knowledge. The chapter includes the details of Local Area Networks (LAN), wireless LANs, virtual LANs, wide Area Networks (WANs), ISDNs, world wide web,

HTML and VRML, origin of network computers, data security procedures. In this chapter the focus is on the key technologies driving widely dispersed KMS. LAN is designed to support only one vendor's terminal equipment, or it may be for multivendor support. Wireless LANs offer an attractive alternative for those who want to add new users to corporate LANs and support mobile workers who telecommute from far flung areas. Virtual LANs are logical groupings of network addresses organized independently from the physical networks on which they reside. Related networking technologies like voice messaging, speech recognition etc are also been used now-a-days.

Chapter 7 covers the main features of knowledge economy, information and to name a few communication technologies, human capital, software and distributed knowledge and innovation. In this chapter knowledge economy has been described with its features considering KE as a Vision. The stress is on 'Software' which is not only computer software but also of software that may have high initial cost of production but will typically have much lower costs of replication. There is also a need for foundation inquiry when both economics and management are concerned.

Chapter 8 highlights the importance of KMS to make strategic planning effective, how strategic plannings are made, what are company's critical success factors, long and short range plans and how knowledge discovery is useful in environmental awareness analysis. It also describes how vision, mission, objectives, goals play a great role in describing the strategies of company. The factors responsible for strategic planning like problem finding, core competencies, critical factors, benchmarkings and softwares in discovering strategic planning knowledge are also discussed in detail.

Chapter 9 highlights the use of KMS in Marketing. It describes the use of knowledge management in market research and analysis and using knowledge to price products over their life cycle. The chapter includes the market mix, customer focus, the factors to be considered while discovering market knowledge like focus of core competencies, market research

information, development of products and services, market share, quality of products etc. It also focuses on market strategy and how knowledge of customers can be helpful in selecting marketing strategy.

Chapter 10 is about the application of knowledge in manufacturing organizations. This chapter is based on manufacturing operations, TQM, supply chain, KMS in manufacturing, analysis of vendors, buyer, knowledge discovery to develop an overall purchasing supply chain and knowledge to discover and track quality problems. It also includes the broad view of manufacturing operations, the focus on TQM, the factors useful in discovering manufacturing knowledge like redesigning, life cycles of products, concept of JIT, WIP flow of manufacturing operations and the manufacturing processes of competitors, production planning.

Chapter 11 is about the application of knowledge in financial organisations. The main focus of this chapter is the use of KMS in accounting and finance. The important factors in discovering financial knowledge, cost accounting approaches, using knowledge to determine appropriate costing methods and using knowledge to manage Investments and maximize ROI. The key concepts of this chapter are financial management like ROI, capital turnover, return on sales, inventory turnover, ratios used for calculation assets, liquidity etc. The financial principles based on knowledge of company's overall operations and the softwares useful in discovering financial knowledge.

Chapter 12 highlights the application of knowledge in human resource sector. The main features included in this chapter are: role of knowledge officer, human resource principles based on knowledge of organisational personnel, software useful in discovering HR knowledge, wage and salary analysis to resolve company's HR Issues and utilizing knowledge to resolve work force.

The book has been written in simple and lucid language. It presents information about the use of knowledge in diverse fields of organization. The book contains real example of some organizations where knowledge management is used to maximize the profits and gain expertise in the particular field. The author has made a value addition by highlighting the use of knowledge and its applications in sectors which are the profit maximization and minimizing loss sectors of any organization. The subject index helps the reader in saving the time for locating a particular concept in the book but at the same time the author has not used much of the pictorial and diagrammatic representations of some concepts in the book. The book is recommended for company managers, professionals and for information system personnel.

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