TECNIA Journal of Management Studies

Vol. 1, No. 2, October 06-March 07

TECNIA INSTITUTE OF ADVANCED STUDIES
(Approved by AICTE, Ministry of HRD, Govt. of India and affiliated to GGS Indraprastha University, Delhi.)

Tecnia Institute of Advanced Studies, Rohini, Delhi.

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Vol. 1. No.2, October 06 - March 07

Editorial Office & Administrative Address:
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Published & Printed by Prof. Vikas Prakash, Dean (Academics), on behalf of Tecnia Institute of Advanced Studies. Printed at Rakmo Press Pvt. Ltd., C-59, Okhla Industrial Area, Phase-I, New Delhi-110020. Published from Tecnia Institute of Advanced Studies, 3 PSP, Institutional Area, Madhuban Chowk, Rohini, Delhi-85. Editor: Dr. D. Antony.

General Information

- Tecnia Journal of Management Studies is published half-yearly. All editorial and administrative correspondence for publication should be addressed to the Editor, Tecnia Institute of Advanced Studies, 3 PSP, Inst. Area, Madhuban Chowk, Rohini, Delhi-110085.

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- Printed & Published by: Prof. Vikas Prakash on behalf of
Tecnia Institute of Advanced Studies,
Madhuban Chowk,
Rohini, Delhi-110085.

- Printed at: Rakmo Press Pvt. Ltd.,
C-59, Okhla Industrial Area, Phase-I,
New Delhi-110020.

- Editor: Dr. D. Antony.

From The Editor's Desk

India witnessed a remarkable transformation in its economic landscape in recent years. The era of economic reforms was accompanied by the virtual disappearance of the restrictive license-permit control regime and consequent liberalisation of private initiative and enterprise. The fall out of liberalised policies, in fact, had significant impact on several key sectors in the Indian economy. The Indian manufacturing sector, for instance, which had long been accustomed to a protected domestic regime now stood exposed to the relentless and harsh winds of competition both from within the country and abroad.

India has achieved a fair degree of success by implementing its reform agenda and this fact is reflected in many key sectors of the economy. Significant achievements have been recorded in diverse manufacturing sectors like drugs & pharma industries, automobile & ancillary industries, light engineering industries including electronics & software and textiles to mention a few. This would imply that the industry on its part has responded favorably to the liberalised policies set in motion by the government by upgrading their technology, investing in R&D and realising the need for higher degree of skills in a competitive world environment.

We are happy to launch the second issue of our academic journal, Tecnia Journal of Management Studies. This issue incorporates the following articles.

* Psychological Well-being of Budding Entrepreneurs.
* India's Trade and Investment Opportunities in Africa.
* Strategic Marketing for Higher Education.
* Understanding the Agreement on Agriculture under World Trade Organisation.
* Credit Risk Management in Indian Banks: A Comparative Study.
* A Study of the Motivational Climate and Role Efficacy in Indian Call Centres.
* Role of Management Information System in Indian Universities.
* Salaam Mumbai and Salaam Mumbai Dabbawalas.

My heartfelt thanks to the authors Mr. M. Birasnav, Dr. S. Rangnekar, Mr. Madan Lal, Dr. P. Kameswara Rao, Prof. Anil P. Dongre, Mr. Swaranjeet Arora, Dr. Abhijeet Chatterjee, Dr. Anukool M. Hyde, Prof. Satish Seth, Dr. M.S. Turan, Ms. Sangeeta Gupta, Prof. H. Bansal, Dr. A. K. Saini, Prof. Sanjeev Bansal, Ms. D. Surekha Thakur, who have sent their manuscripts in time and extended their co-operation particularly in following the American Psychological Association (APA) Style Manual in the references.

I wish to sincerely thank our Chairman Sh. R. K. Gupta who has always been a guiding light and prime inspiration that led us to publish this Journal. I am grateful to Prof. A. K. Srivastava, Director, for his continued encouragement for bringing out the journal in such a proper form. I am also grateful to Prof. A. K. Sengupta, Emeritus Professor & Chairman Editorial Committee for his advice and suggestions in shaping the Journal. My sincere thanks to our distinguished reviewers Prof. P. C. Chhabra, Prof. W. A. Qazi & Dr. Urvashi Sharma for their untiring effort and support in bringing out this bi-annual Journal. I am grateful to Ms. Shreemoyee Patra for her editorial advice. Mr. Parveen Kumar deserves special mention for his assistance in integrating, editing and administrating the work sincerely and efficiently.

I am sure the issue will generate immense interest among corporate practitioners, policy-makers, academicians and students.

Dr. D. Antony
Editor

Contents

Psychological Well-being of Budding Entrepreneurs

Abstract: *An entrepreneur is a person who decides to create wealth and add value to the productive process. He/she tends to walk differently, march on his/her own path and is highly creative. Significant attention is given to entrepreneurship as it reduces unemployment and creates wealth. This paper analyses the psychological well-being of budding entrepreneurs by using Ryff's model (questionnaire which comprises six factors, such as autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. The data collected on the basis of these factors has been tested with different statistical tools to a sample size of 64, (N = 64). The results indicate that budding entrepreneurs have a positive affect of psychological well-being. Age and educational qualification of budding entrepreneurs do not affect their psychological well-being.*

M. Birasnav*
S. Rangnekar**

Introduction

ONE of the priorities of the government is to encourage entrepreneurship as it gives an important opportunity to create employment and economic growth. The government allocates substantial fund to create entrepreneurs and encourages all institutions to set up Science and Technology Entrepreneurship Parks (STEP) to create an institutional mechanism to promote entrepreneurial culture among students through Entrepreneurship Development Programme(EDP). The STEP provides training to students who are willing to start a business without consideration of the organisational size. In this paper we refer to such students as budding entrepreneurs.

Ethnic network is an important medium through which entrepreneurial skills and knowledge are transferred to budding the entrepreneurs. An informal vocational education system, which stems from ethnic network, provides mentors as well as on the job training (Dana, 2001). This network facilitates the introduction of entrepreneurs to the wholesalers and warnings of government inspections.

In general, an entrepreneur has the following traits (Sexton *et al.*, 1985):

i. moderate risk-taking propensity;
ii. ability to tolerate ambiguity;
iii. an internal locus of control;
iv. high need for autonomy, dominance, independence and self-esteem; and
v. a low need for conformity and support.

The entrepreneurs need autonomy to direct the resources of his/her organisation as well as independence in decision-making. The entrepreneur's gender plays an important role in determining these traits in the individual. Females have scored significantly lower on two traits related to risk taking and energy level, and higher on two traits related to autonomy and change than males (Sexton *et al.*, 1990). The environment, whether local, regional or global, is a major concern for many entrepreneurs. They see problems in our society's system as well as a lack of awareness at an individual level. Entrepreneurs need to set goals and accomplish them through their own efforts. Entrepreneurs have also to develop their potential continuously.

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A very interesting question that arises in our minds nowadays is that how do we identify the entrepreneur who has positive or negative psychological well-being? This significant question bears the solution to many of the psychological problems that the entrepreneurs face. This study was carried out to identify which psychological factors influence the well-being of budding entrepreneurs the most.

Literature Review

To better understand the emergence of entrepreneurial activity in a given country, we need to complement the analysis of the psychological and non-psychological characteristics of the individual entrepreneur. The psychological factors are creativity, tendency towards risk taking, need for achievement, desire for autonomy and independence, and search for power. The non-psychological factors are education, experience in creating firms, social position that facilitates the decision to exploit opportunities. Exploiting these opportunities depend on how entrepreneurs live and work (Cuervo, 2005).

Today all countries are paying special attention to promote entrepreneurial activities. Entrepreneurial opportunities in Israel are well created and thus entrepreneurs there have a higher social status than Americans and Hungarians. The Israelis are great risk-takers while expressing the readiness to leave a secure job to establish a business. The Israelis and Americans are also reported to be high on initiative and independence than Hungarians (Pines *et al.*, 2005). The lacunae of the educational system in India do not necessarily promote entrepreneurial thinking, creativity or innovation (Dana, 2001). New generations of individuals, that is, budding entrepreneurs with talent and excellent training, are being added to these situations by educational institutions.

Entrialgo and others concluded that the individuals who best tolerate ambiguity are more innovative, willing to take a risk and present a more proactive behaviour (Entrialgo *et al.*, 2000). Similarly, there are significant differences in the entrepreneurial orientation depending on the tolerance for ambiguity. Budding entrepreneurs are required to tolerate ambiguity in different situations; these are only tackled by proper training provided by institutions to handle ambiguity. In relation to well-being, when adults in different occupational settings have been examined, loss of employment has been found to impact negatively on well-being. For example, cross-sectional studies contrasting unemployed with employed people have identified higher levels of psychological distress (Waters *et al.*, 2002), depression and lower levels of self-esteem (Muller *et al.*, 1993) in the unemployed groups. The evidence for adults who were insecurely connected to part time jobs or intermittent work is that they also differ on the level of well-being depending on their occupational status.

The government promotes entrepreneurship as it reduces unemployment in the country. Specifically, men are more affected by unemployment than women (Theodossiou, 1998). Adolescents, without full-time paid work have shown poorer well-being than adolescents who are doing full-time work (Morrell *et al.*, 1994). Parasuraman and others examined three indicators of entrepreneurial success and well-being: career satisfaction, family satisfaction and life stress. They concluded that gender influences the career success and well-being of entrepreneurs primarily through its effect on time commitment to work and time commitment to family. This is because women entrepreneurs devote significantly more time to family than men and men entrepreneurs devote more time to work than women (Parasuraman *et al.*, 1996).

Creed and others examined the well-being and career decision-making self-efficacy of adolescents before and after leaving school. Leaving school improved the well-being and confidence to some extent. One group was disadvantaged by having poorer well-being while at school, which predisposed them to disadvantage in the labour market (Creed *et al.*, 2003).We found that the Ryff's model (Ryff, 1989) for psychological well-being was suitable to identify the type of budding entrepreneur's psychological well-being. Her model consists of six aspects: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. These six aspects are well-suited to different situations. This model has widely been used by many researchers (Van Dierendonck, 2005; Vleioras *et al.*, 2005; Lindfors *et al.*, 2006; Cheng *et al.*, 2005; Kafka *et al.*, 2002). The six aspects of Ryff's model are described below:

- **i.** Autonomy: Being self-determined and independent;
- **ii.** Environmental mastery: Being able to choose or create contexts, which are appropriate to one's psychological condition;
- **iii.** Personal growth: Continuous development of one's potential;
- **iv.** Positive relations with others: Maintaining warm and trusting relationships and being able to love;
- **v.** Purpose in life: Setting goals, intentions and a sense of direction; and
- **vi.** Self-acceptance: Having a positive opinion of oneself.

All the above six aspects are important for budding entrepreneurs to start a business and are, therefore, used for this study.

Objectives of the study

The objectives of this study are:

- **i.** To find out whether the budding entrepreneurs have positive or negative psychological well-being.

- **ii.** To analyse the impact of entrepreneurship factors, mainly those affecting the status of psychological well-being, on budding entrepreneurs.

Hypotheses

This paper tests the following three hypotheses:

H1: Budding entrepreneurs have a positive affect psychological well-being.

H2: The psychological well-being of budding entrepreneurs is irrelevant to their educational qualification.

H3: Budding entrepreneurs who are more than 24 years of age have a high level of positive affect psychological well-being than those who are less than 24 years of age.

Methodology

Questionnaire

The questionnaire used for the study comprised six dimensions. Each dimension had nine items developed by Ryff concerning psychological well-being. One set of dimensions involved questions of autonomy, the second set dealt with environmental mastery, the third set concerned with personal growth, the fourth set was to measure positive relations with others. The fifth set was to measure the purpose in life, the sixth set dealt with self-acceptance. The scores were graded as strongly agree, moderately agree, slightly agree, slightly disagree, moderately disagree and strongly disagree with the rating of 1 to 6, respectively.

1. Autonomy

A budding entrepreneur's autonomy means that he/she is self-motivated, prefers an environment where he/she has the freedom to act on goals or tasks with little or no direct supervision. He/she is comfortable in personal responsibility for his/her action and also he/she is willing to seek advice. Autonomy resists social pressures to think and act in certain ways; evaluating oneself by personal standards. For example, one can say in such a situation, 'I have confidence in my own opinions, even if they are different from the way most other people think'.

2. Environmental mastery

Enterprises, whether small in size have come to realize their market place in a dynamic and highly complex environment where customer expectations and the approach to selling stand in sharp contrast to the domestic market. Success in the international arena is a formidable challenge for all organisations, especially for an early-stage company that must figure out ways to get close to the customer to beat the competition and drive new revenue streams. The environmental mastery of budding entrepreneurs means feeling competent and able to manage a complex environment; choosing or creating personally suitable contexts. For example, one can say in such a situation, 'I am good at managing the responsibilities of daily life'.

3. Personal growth

To survive in today's competitive market, the environment entrepreneurs must know about the changes in technology to improve their knowledge and to keep their employees aware of the changes. Personal growth in view of budding entrepreneurs is the feeling of continued development; potential and being open to new experiences; feeling increasingly knowledgeable and effective. For example, one can say in such a situation, 'For me, life has been a continuous process of learning, changing and growth'.

4. Positive relations with others

An important part of an entrepreneur's life depends on how he/she maintains relations with others. The relationships are tested and used when he/she markets his/her products. The entrepreneur's relationship with his/her employees decides their organisation productivity. The positive relations with others mean having warm, satisfying, trusting relationships; being concerned about others' welfare; being capable of strong empathy, affection and intimacy; understanding the give and take aspect of human relationships. For example, one can say in such a situation, 'People would describe me as a giving person, willing to share my time with others'.

5. Purpose in life

An entrepreneur's goal setting decides the direction in which his/her organisation is administering. This means having goals and a sense of direction in life; feeling that both present and past experiences are meaningful; holding beliefs that give purpose to life. For example, one may say in such a situation, 'Some people wander aimlessly through life; I am not one of them'.

6. Self-acceptance

Self-acceptance means having a positive attitude towards oneself, acknowledging and accepting multiple aspects of self; feeling positive about our past life. For example, one may say in such a situation, 'When I look at the story of my life, I am pleased with how things have turned out so far'.

The Ryff questionnaire used for the study comprised both positive and negative psychological questions. For the purpose of analysis, we separated all the positive questions from the negative questions and obtained the total score between them.

Respondents of the study

India needs more entrepreneurs in the current competitive scenario. All leading technical institutions, such as Indian Institutes of Technology (IITs), established STEP to promote budding entrepreneurs in the high-level scenario of on-campus recruitments. As many companies offer good package to students, developing risk-taking aptitudes among the students under such protected environment is vital. For this reason, STEP, IIT Roorkee, conducts Entrepreneurship Development Programme (EDP) every year. According to McMullan and others the best e*ntrepreneurship* programmes offer a lot more than just drafting business plans (McMullan *et al*, 1998). People can be educated to start business with a potential for growth. Even students who were not initially intending to develop new businesses or become members of the entrepreneurial team of small growing firms find themselves so directed, perhaps by the norms and expectations of the group or perhaps by the content of their studies. The number of students who had shown interest and joined the EDP was 64. These 64 students (men, 55; women, 9) who have working experience of 0 to 16 years, agreed to participate in this study.

This group had a median age of 24 years (minimum, 20; maximum, 36). The respondents were studying Bachelor of Technology (B Tech), Master of Technology (M Tech), Master of Business Administration (MBA), and Doctor of Philosophy (PhD) in IIT Roorkee, with a majority studying (MBA). The respondents first completed a form requesting demographic information. Table 1 shows the educational background of the respondents and their age level. The graphical representation of the number of participants and their educational qualifications is shown in Figure 1.

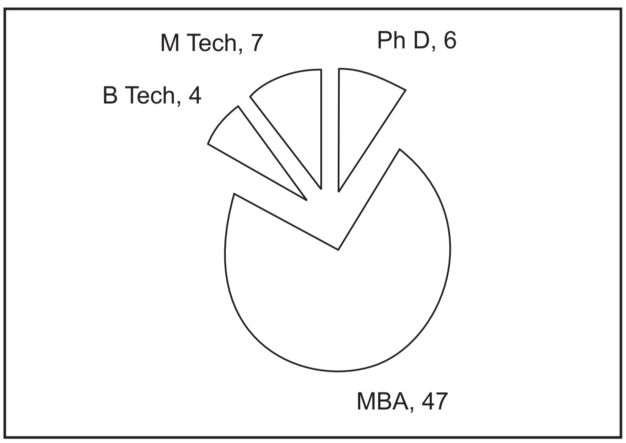

Figure 1. Educational qualification of the participants

Statistical analysis

The Analysis of Variance (ANOVA) was used for the study to test the effects of psychological well-being of MBA with others (BTech, MTech and PhD) based on their age below and above 25. The internal consistency of the questionnaires was calculated by computing Cronbach's á for each of the dimensions. All the tests were performed in Statistical Package for Social Science (SPSS) version 12. Pearson's correlation coefficients were computed to examine the inter-correlations between the different dimensions of psychological well-being.

Table 1. Characteristics of the respondents in the study

Variables	Frequency	Percentage
Gender		
Male	55	85.94
Female	9	14.06
Age (years)		
<21	2	03.13
21-24	38	59.38
25-30	22	34.37
>30	2	03.13
Education		
BTech		
Male	4	06.25
Female	0	00.00
MTech		
Male	6	09.38
Female	1	01.56
MBA		
Male	39	60.94
Female	8	12.50
PhD		
Male	6	09.38
Female	0	00.00

Results

The statistical analysis of the data shows that there were generally significant differences between the respondents in the sample on socio-demographic (age, sex, marital status) and socio-economic status (occupational status, income adequacy and education). Table 2 shows the mean and standard deviation of the six aspects of psychological well-being. The aspects personal growth and positive relations with others are rated high by budding entrepreneurs. Least deviations on the responses of students are found on all aspects excluding their age.

Table 2. The mean and standard deviation of the six aspects of psychological well-being

Dimensions	Mean	Standard deviation
Age (20-36 years)	24.00	2.68
Autonomy	04.58	0.76
Environmental mastery	04.58	0.73
Personal growth	05.11	0.78
Positive relations with others	05.01	0.76
Purpose in life	04.98	0.81
Self-acceptance	04.64	0.64

Table 3: The internal consistency coefficient of the six aspects of psychological well-being

Aspects	Cronbach's α (alpha)
Autonomy	0.568
Environmental mastery	0.672
Personal growth	0.774
Positive relations with others	0.874
Purpose in life	0.728
Self-acceptance	0.703

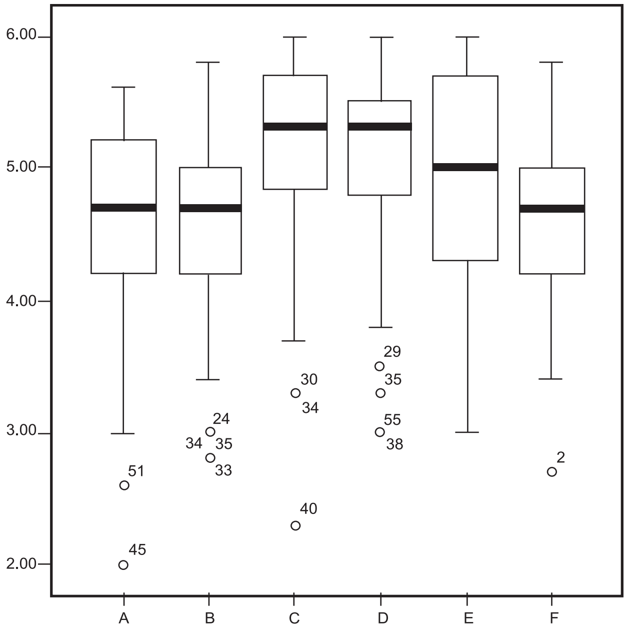

Figure 2. The mean and quartiles of positive affect psychological well-being

Note: A=autonomy; B=environmental mastery; C=personal growth; D=positive relations with others; E=purpose in life; F=self-acceptance.

The internal consistency coefficient (Cronbach' α) of the six aspects of psychological well-being questionnaire is presented in Table 3. The Cronbach's α of all aspects of psychological well-being is ranged from 0.568 to 0.874 and it is found by SPSS 12.0. The alpha value of autonomy 0.568 is nearer to the lowest acceptability of alpha value 0.6.

The central question of this study concerning positive or negative affect psychological well-being was explored by comparing the distribution of answers to each of the questions by the respondent groups as a whole. For instance, respondents were asked whether during the last two days they had felt isolate from others or excited by something. This analysis showed that individuals vary along two dimensions already mentioned above, one is positive affect and other is negative affect. These two dimensions were independent of each other. It also predict an individual's score on the negative affect dimension from any knowledge of his score on the positive affect dimension and vice versa. On the other hand, both dimensions were related in the expected direction to overall self-ratings of happiness. The best predictor of the overall self-rating was the discrepancy between the two scores: the greater the excess of positive over negative affect, the higher the overall rating of psychological well-being.

In Figure 2, the box plot diagram shows the mean and quartiles of the six aspects of psychological well-being. The mean of personal growth is higher than other aspects. This means that the budding entrepreneurs are giving greater significance to personal growth than other entrepreneurs.

Table 4 shows the correlation analysis of the six aspects of psychological well-being. Age and autonomy of the budding entrepreneurs are not correlated with any other aspects of well-being. The aspect of positive relationship with others is significantly correlated with environmental mastery ($r = 0.42$, $p<0.01$), personal growth ($r = 0.47$, $p<0.01$), and self-acceptance ($r = 0.49$, $p<0.01$).

Discussion

The analysis of the Ryff questionnaire showed that the mean score of the positive psychological well-being was 4.82 with the standard deviation of 0.47. The mean score of the negative psychological well-being was 1.57 with the standard deviation of 0.55.

The result supported the hypothesis H1 that the budding entrepreneurs have positive affect psychological well-being. Budding entrepreneurs reported autonomy as a significant factor on their roles. They never tend to be influenced by what others think of them. It is not difficult for them to voice their opinions in controversial matters. According to Sexton (Sexton et al, 1985) and Cuervo (2005), entrepreneurs need high autonomy to direct the resources in his/her organisation. It is important to know what this hypothesis says. It says that the budding entrepreneurs are continuously involved in activities, which expands their horizons. The results also support Dana's ethnic network importance for entrepreneurship (Dana, 2001). It means that they had utilised opportunities for mutual interaction with their family members as

Table 4. Correlation analysis of the six aspects of psychological well-being

	Age	Autonomy	Environmental mastery	Personal growth	Positive relations	Purpose in life	Self-acceptance
Age	1						
Autonomy	-0.12	1					
Environmental mastery	0.10	0.16	1				
Personal growth	0.03	0.15	0.37**	1			
Positive relations	0.01	0.11	0.42**	0.47**	1		
Purpose in life	0.18	0.13	0.40**	0.35*	0.37*	1	
Self-acceptance	0.08	0.24	0.32*	0.36**	0.49**	-0.007	1

*Notes: * Correlation is significant at the 0.05 level (2-tailed)*
*** Correlation is significant at the 0.01 level (2-tailed)*

well as relations. This ethnic network suggests the informal role of mentor to budding entrepreneurs. They set up goals and knew what would be achieved. This psychology of budding entrepreneurs did not differ with entrepreneurs.

The hypothesis H2, which assumes that the psychological well-being of budding entrepreneurs is irrelevant to their course of study, is supported by the samples of budding entrepreneurs ($F=1.19$, $p=0.32$). They had no different feeling about psychological well-being. The course of study BTech, MTech, MBA or PhD does not affect the psychological well-being of entrepreneurs as they have the same feelings. To start a business and run it successfully, entrepreneurs need different skills rather than their psychological state. The course of study abruptly improves the knowledge of students rather than their psychology. So we can say that the degree for which the budding entrepreneurs study never affect their psychological well-being.

This study does not support the hypothesis H3, which says that the budding entrepreneurs who are of more than 24 years of age have a high level of positive affect psychological well-being than those who are less than 24 years of age. The respondents of this study who were of less than 24 years of age were all budding entrepreneurs and they also had not started any business. They attended only the EDP. So they had same feelings of autonomy, positive relations with others and so on as those of more than 24 years of age. Age does not influence psychological well-being of budding entrepreneurs.

We made an attempt to include the age of the budding entrepreneurs to find the correlation with the aspects of psychological well-being. The correlation analysis (Table 3) showed no correlation of age (standard deviation was 2.68) and autonomy over entire aspects of psychological well-being. Correlation of environmental mastery over the personal growth ($r=0.37$), purpose in life ($r=0.40$) and positive relations with others ($r=0.42$) was positive. When the budding entrepreneurs fit very well with their neighbours or community, they can come to know of some useful activities, which certainly expands their horizon. This leads to personal growth because of the interaction with the community and the community sees them as affectionate persons. When they interact with others, particularly older people, they may get suggestions for solving many of their problems and may experience confidence and become active to solve that problem.

Thus, budding entrepreneurs not only feel that they are active, they are also confident when interacting with others. Personal growth is positively correlated with purpose in life ($r=0.35$), positive relations with others ($r=0.47$) and self-acceptance ($r=0.36$). When the budding entrepreneurs are active in setting up plans and goals, they certainly feel an improvement within themselves. When they are confident about achieving these goals, others want to keep warm relations with them.

Conclusion

This study analysed the psychological well-being of budding entrepreneurs with the effect of their age. In relation with earlier studies, it was found that personal growth had an important role for psychological well-being of budding entrepreneurs. The study was carried out using the data collected from the students who attended the EDP conducted at IIT Roorkee with the sample size of 64. This paper answered all the three hypotheses. After analysing the samples we concluded that all the students as budding entrepreneurs have positive affect psychological well-being. The interesting findings of the relations of course study with psychological well-being showed that they were unrelated. This meant that the psychological well-being of budding entrepreneurs was irrelevant to their course of study. This paper also answered the question related to the age of budding entrepreneurs. They have same level of positive affect psychological well-being with the consideration of age. Age is not a bar to measure the psychological well-being of entrepreneurs who is in the budding stage. The entrepreneurial skills can be developed irrespective of age and educational qualification. Personal growth played an important role among the budding entrepreneurs from all the aspects of psychological well-being. Correlation of personal growth over positive relations with others showed that keeping good relations with their neighbours improved their personal growth through useful interaction. When they fitted in with their neighbours or community, they expanded their horizon.

References

- Cheng, S. & Chan, A.C.M. (2005). Measuring psychological well-being in the Chinese. *Personality and Individual Differences*, 38(6), 1307–1316.
- Creed, P.A., Muller, J. & Patton, W. (2003). Leaving high school: The influence and consequences for psychological well-being and career-related confidence. *Journal of Adolescence,* 26(3), 295-311.
- Cuervo, A. (2005). Individual and environmental determinants of entrepreneurship. *International Entrepreneurship and Management Journal,* 1(3), 293–311.
- Dana, L.P. (2001). The education and training of entrepreneurs in Asia. *Education + Training,* 43(8/9), 405-415.
- Dayton, B.I., Saengtienchai, C., Kespichayawattana, J. & Aungsuroch, Y. (2001). Psychological well-being Asian style: The perspective of Thai elders. *Journal of Cross-Cultural Gerontology,* 16(3), 283–302.
- Entrialgo, M., Fernandez, E. & Vazquez, C.J. (2000). Psychological characteristics and process: The role of

entrepreneurship in Spanish SMEs. *European Journal of Innovation Management,* 3(3), 137-149.

- Kafka, G.J. & Kozma, A. (2002). The construct validity of Ryff's scales of Psychological well-being and their relationship to measures of subjective well-being. *Social Indicators Research,* 57(2), 171–190.
- Lindfors, P., Berntsson, L. & Lundberg, U. (2006). Factor structure of Ryff's psychological well-being scales in Swedish female and male white-collar workers. *Personality and Individual Differences*, 40(6), 1213–1222.
- McMullan, W.E. & Gillin, L.M. (1998). *Industrial Viewpoint - Entrepreneurship Education:* Developing technological start-up entrepreneurs: A case study of a graduate entrepreneurship programme at Swinburne University. *Technovation,* 18(4), 275-286.
- Morrell. S., Taylor. R., Quine, S., Kerr, C. & Western, J. (1994). A cohort study of unemployment as a cause of psychological disturbance in Australian youth. *Social Science and Medicine*, 38(11), 1553–1564.
- Muller, J., Hicks, R. & Winocur, S. (1993). The effects of employment and unemployment on psychological well-being in Australian clerical workers: Gender differences. *Australian Journal of Psychology,* 45(2), 103–108.
- O'Driscoll, M.P. (2004). Psychological well-being, satisfaction and social support: A longitudinal study in New Zealand. *Equal Opportunities International,* 23(1/2), 36-56.
- Parasuraman, S., Purohit, Y.S., Godshalk, V.M. & Beutell, N.J. (1996). Work and family variables, entrepreneurial career success and psychological well-being. *Journal of Vocational Behavior,* 48(3), 275–300.
- Pines, A.M., Levy, H., Utasi, A. & Hill, T.L. (2005). Entrepreneurs as cultural heroes, a cross-cultural, interdisciplinary perspective. *Journal of Managerial Psychology,* 20(6), 541-555.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology,* 57(6), 1069-1081.
- Sexton, D.L. & Bowman, N. (1985). The entrepreneur: A capable executive and more. *Journal of Business Venturing,* 1(1), 129-140.
- Sexton, D.L. & Bowman, N. (1990). Female and male entrepreneurs: Psychological characteristics and their role in gender related discrimination. *Journal of Business Venturing,* 5(1), 29-36.
- Theodossiou, I. (1998). The effects of low-pay and unemployment on psychological well-being: A logistic regression approach. *Journal of Health Economics*, 17(1), 85-104.
- Van Dierendonck, D. (2005). The construct validity of Ryff's scales of Psychological well-being and its extension with spiritual well-being. *Personality and Individual Differences*, 36(3), 629–643.
- Vleioras, G. & Bosma, H.A. (2005). Are identity styles important for psychological well-being? *Journal of Adolescence,* 28(3), 397–409.
- Waters, L.E. & Moore, K.A. (2002). Reducing latent deprivation during unemployment: The role of meaningful leisure activity. *Journal of Occupational and Organisational Psychology,* 75(1), 15–32.

India's Trade and Investment Opportunities in Africa

Abstract: *Commercial activities have not grown commensurately between India and the African continent despite this continent providing many trade and investment opportunities. This paper focuses on India's recent trade and investment initiatives in Africa. It was found that Africa's exports are predominantly primary commodities, accounting for more than two-thirds of all African exports. The growing manufacturing sectors of these countries increasingly depend on imported components. Transportation and communication equipments are major imports in addition to food products. Regional trading arrangements are envisaged to foster trade and investment relations among member-countries by removal of tariffs and other impediments to intra-regional trade flows. There has been a further wave of FDI-friendly measures to attract more FDI into African countries. India's investment in the African countries has been in the area of fertilizers, cement, pharmaceutical, oil and gas, and auto components. It is suggested that private-sector development strategies would help African countries to build up industrial and technological capabilities.*

Madan Lal*

Introduction

TRADE and investment are important means of commercial relations in the present context of economic affairs between two trading partners. India and the countries of the African continent have traditionally had close and cordial relations. However, commercial relations have not grown commensurately. The reason could be explained in terms of the distance, language barriers, inadequacy of information about business opportunities, incidence of civil strife, macro-economic instability and the modest progress made in liberalisation and privatisation.

The region of sub-Saharan Africa has great diversities with 54 states, including 34 least developed countries (LDCs) of this region sharing many common characteristics They range significantly in terms of population, size and economies of scale. The economies of sub-Saharan Africa are, for the most part, small and fragile and, as a result, the region is being left behind in the race of global economy.

The economic scenario of the sub-Saharan region has been sombre by any economic or social indicator when the four major developing regions of the world, viz., sub-Saharan Africa, East Asia, South Asia, and Latin America are compared. It has the second lowest gross domestic product (GDP) per capita growth rate, the lowest average life expectancy of 50 plus years, lower secondary school enrolment rate, the lowest literacy rate, the lowest number of children immunised against childhood diseases, and the lowest daily caloric intake.

The African continent accounts for 12.4 per cent of the global population, 3.2 per cent of the global GDP and 2 per cent of world exports in goods and services. Besides, it has the highest rate of infant morality and the highest percentage of people living just under the international poverty line. As reported, about 43 per cent of the population of sub-Saharan Africa is subsisting on incomes of less than US$350 per annum (UNIDO, 2004).

Altogether the African continent provides myriad opportunities for trade and investment because of its population (700 million) and with rich natural resources. Of the 54 countries of sub-Saharan Africa, India's trade is with 15 countries, which include Benin, Congo, Ethiopia, Ghana, Guinea Bissaa, Kenya, Mauritius, Mozambique, Niger, Nigeria, Senegal, South Africa, Sudan, Tanzania, and Uganda. These countries together constitute about 3 per cent of

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India's trade. In a bid to increase bilateral trade and investment India is focusing on seven African countries, viz., Ghana, Nigeria, South Africa, Tanzania, Kenya, Ethiopia and Mauritius. India has now expanded the programme to cover the entire continent of Africa, including six north African countries viz., Algeria, Egypt, Libya, Morocco, Sudan and Tunisia. This paper focuses on India's recent trade and investment initiatives in Africa.

Africa's composition of trade

Africa's exports are predominantly the primary commodities; these account for more than two-thirds of all African exports. Chief among them is crude oil, Africa's single largest exported product. Many African countries export other mineral and mining products, as well as agricultural and fishery products. Recently, some African countries have become more prominent as exporters of manufactured products, most notably, textiles and apparel. Africa's southern and northern sub-regions have growing industrial sectors whose products range well beyond textiles and apparel. South Africa, in particular, has emerged as an important regional industrial hub, with increasing exports of automobiles to the rest of the world.

Compared to its exports profile, Africa's import trading partners are more diverse, encompassing countries around the world. Products that support the fundamental economic activities of African countries, such as transportation and communication equipments, are among the continent's major imports. Food products are another significant import. On the other hand, these African countries with growing manufacturing sectors increasingly depend on import component products. African import data show that the increasingly industrialised countries in Africa have emerged as part of the global supply chains in their respective sectors.

Asia has emerged as an important partner in Africa's trade and development. Africa's exports to Asia grew significantly. Also, Asia's developing economies have increased their imports from African countries significantly. In fact, Asia's imports from Africa outpaced its imports from other regions. Countries such as India, China and Taiwan have significantly increased the overall volume of their African imports. (World Bank, 2004)

Africa's exports to Asia are mainly driven by primary commodities and related products. As with Africa's exports to the European Union (EU) and the United States of America (USA), oil and oil related products account for a large share of the continent's exports to Asia. However, other primary commodities, such as agricultural and fishery products, and minerals and crude materials are also increasingly being exported to Asia.

Africa's exports of mineral fuels and other raw materials, such as mineral and mining products to Asia have experienced strong growth because of rising manufacturing sectors in Asia, particularly in China, India, Korea, Taiwan and South-East Asian countries, such as Indonesia, Malaysia, the Philippines, Singapore and Thailand.

A limited number of African countries are endowed with mineral and mining resources, a wide range of non-oil-producing countries also benefit from other types of raw materials and processed raw materials, such as cotton, wood, and leather as well as food and agricultural commodities, for expanding their export potentials. The growth in African exports of food and agricultural commodities to Asia is due to the large populations with growing income levels in the Asian countries. Non-essential foods such as coffee, cocoa, tea and nuts are experiencing stronger demand in Asia than in the already saturated markets of the developed countries.

Asia is emerging as a strategic target in diversifying the markets of African products. The scope of value-added processing in Africa is still limited. This could be developed through linkages and developing consumer relations with Asian countries and African producers/exporters.

Market diversification is not the only benefit of deepened trade relations between the two regions. Asia can also contribute to Africa's quest for product diversification in its export structure. South Africa has recently shown a growth in its manufacturing export to Asian countries. Similarly, the Asian countries are providing essential inputs to Africa's growing manufacturing sector, particularly its textile and apparel sectors, and in some cases, its automobile sector. There is a positive relationship between Africa's growth in manufacturing exports to the EU and USA and growth in imports from Asia.

India's composition of trade with Africa

India's trade with sub-Saharan African countries is shown in Table 1. Table 2 shows India trade with selected countries of Africa. As shown in Table 1, India's total trade with sub-Saharan countries increased from Rs. 1,55,556 million in 2000-01 to Rs. 327,524 million in 2004-05, registering a growth of 200.1 per cent during the period. Similarly India's exports increased from Rs. 82,299 million to Rs. 1,82,574 million, registering an increase of 121.84 per cent during the period. Imports from these countries also increased from Rs. 73,257 million to Rs. 1,44,950 million, registering an increase of 97.87 per cent during the same period. All the years, 2000-01 to 2004-05, India had favourable balance of trade except in 2002-03, when it had trade deficit of Rs. 20,882 million.

India's composition of trade with Africa consists of traditional and non-traditional items. In the category of traditional items, mainly tea/coffee, pulses, rice (basmati/non-basmati), wheat, cereals, dairy products, spices, fruits and vegetables, marine/meat products etc., are included. Products included in non-traditional category are leather and leather products, dyes/intermediates and coal tar chemicals, drugs/pharmaceutical and fine chemicals, residual chemical and allied products, non-ferrous metals, manufactures

Table 1.India's foreign trade with sub-Saharan African countries.

Year	Expots	Imports	Total trade	Balance of trade (Rs. Million)
2000-01	82299	73257	155556	9042
2001-02	103064	100753	203817	2311
2002-02	118947	139829	258776	-20882
2003-04	141378	125679	267057	15899
2004-05	182574	144950	327524	37624

Source: Ministry of Commerce & Industry, Annual Report 2005-06.

Table 2. India's trade with select countries of Africa (in Rs million) from the year 2000 to 2005.

Country	2000-01	2001-02	2002-03	2003-04	2004-05
1. Algeria					
Exports	940	1403	3218	5613	1002
Imports	118	673	528	205	284
Total trade	1058	2076	3746	5818	1286
BOT	822	730	2690	5408	718
2. Ghana					
Exports	2654	3263	5108	8394	7806
Imports	1207	950	902	1513	2230
Total trade	3861	4213	6010	9907	10036
BOT	1447	2313	4206	6881	5576
3. Kenya					
Exports	6325	7440	9856	10545	18638
Imports	860	1521	1618	1927	2003
Total trade	7185	8961	11474	12472	20641
BOT	5465	5919	8238	8618	16635
4. Mauritius					
Exports	9094	7769	7983	9329	11151
Imports	281	156	781	347	318
Total trade	9375	7925	8764	9676	11469
BOT	8813	7613	7202	8982	10833
5. Nigeria					
Exports	17209	26857	21770	25985	27534
Imports	2871	4155	3763	3476	2163
Total trade	20080	31012	25533	29461	29697
BOT	14338	22702	18007	22509	25371
6.South Africa					
Exports	14066	16633	23020	24784	43071
Imports	46509	68719	101125	87270	96483
Total trade	60575	85352	124145	112054	139554
BOT	-32443	-52086	-78105	-62486	-53412
7. Sudan					
Exports	4458	5827	5078	4934	13669
Imports	346	640	1183	1435	1003
Total trade	4804	6467	6261	6369	14672
BOT	4112	5187	3895	3499	12666
8. Tanzania					
Exports	4627	4330	5592	8077	7564
Imports	2717	3629	4411	5023	5765
Total trade	7344	7959	10003	13100	13328
BOT	1910	701	1181	3054	1800
9. Uganda					
Exports	2019	2651	3193	4032	3288
Imports	140	57	96		287
Total trade	2159	2708	3289	4126	3575
BOT	1879	2594	3097	3937	3001

Source: DGCI&S, Foreign Trade Statistics of India (Principal Commodities & Countries), 2002 and 2003, 2004 and 2005, Kolkata.

of metals, engineering goods like machine tools, machinery and instruments, transport equipments, electronic goods, iron and steel, readymade garments, accessories, etc.(IIFT, 2001).

India's principal imports from the region are: petroleum, crude and products; gold and silver; pearls precious semi-precious stones; inorganic chemicals; coal, coke, briquettes, etc.; wood and wood products; cotton raw and waste; cashew nuts; iron and steel; and fertilizers.

In a bid to enhance India's exports to the sub-Saharan region, the following major products are identified for export: cotton yarn, fabrics and other textile items; drugs and pharmaceuticals; machinery and instruments; transport equipment; and telecom and information technology (Ministry of Commerce & Industry, 2002).

Preferential trade initiatives and regional trade arrangements in Africa

Some developed countries have pursued various preferential trade initiatives with Africa, such as tariff and quota-free access. These preferential measures are often time-bound and redundant with existing Generalised System of Preferences (GSP). While continuation and expansion of well-targeted preferential treatment is desirable for many African countries, these measures alone do not guarantee the full benefits of sustainable export expansion. The response of African countries is critical. However, these countries should develop business environment in terms of governance and industrial capacity so as to seize such opportunities arising from the external environment as preferential trade agreements.

The tariff rates for processed commodities tend to stay higher than rates for raw materials, which typically is a discouraging factor for the value-added activities in the raw-material-producing countries. In Asia, this issue of tariff escalation on resource based products is generally more visible within low and middle-income countries where higher growth of raw material demand has been observed. With the expansion of global trade, and with more links in supply chains, tariff escalation has become an issue not only in North-South trade but in South-South trade as well.

Africa is home to some 30 Regional Trade Arrangements (RTAs) or trade blocs, many of which are part of deeper regional integration schemes. While some RTAs have been revived, there has been a renewed push in recent years to broaden and deepen Preferential Trade Arrangements (PTAs) in Africa. In addition, the African countries are preparing to negotiate Free Trade Arrangements (FTAs) with the EU under the Economic Partnership Agreements (EPAs) (Eximius, 2006).

These trading arrangements are envisaged to foster trade and investment relations among the member countries through the removal of tariffs and other impediments to intra-regional trade flows. In some cases, the arrangement also aims at fostering common economic and monetary union amongst member states, as also a common currency. Some of the RTAs are East African Community (EAC); Economic Community of Central African States (ECCAS); Economic Community of West African States (ECOWAS); Southern African Development Community (SADC).

Taking forward the theme of 'Expanding Horizons' with the objective of recognizing the immense potential to step up trade and investment between Africa and India, a conclave on India-Africa project partnership focused on (Eximius, 2005):

- Reaffirming the commitment of the Government of India towards a strong partnership with African countries;
- Projecting the capabilities, range and depth of Indian industry in the relevant sectors;
- Providing a platform to deliver opportunities to the small and medium segment of the Indian industry;
- Discussing Indian participation in specific African projects;
- Facilitating interaction with the institutions for a long-term involvement in capacity building for the countries – a critical need for sustainable development in Africa;
- Facilitation – focused and individualised business discussion among the visiting decision-makers and Indian industry in various sectors;
- Providing a platform strengthened by the involvement of the appropriate industries, to have relevant and focused discussions by the private sector participants, banks and financial institutions, as well as the participants from the governments.

The conclave saw an effort to reduce dependence of the African nations on Western sources of technology, products and services in their developmental processes and to enable Indian technical consultants and project developers to take advantage of the opportunities. The focus on sectoral projects helped both India and Africa to identify specific and concrete partnership opportunities. This conclave focused on project partnerships in the following sectors and, in particular, the SMEs in each sector:

i. Project consultancy and risk management
ii. Power and energy
iii. Consultancy, transport
iv. Information and communication technology
v. Watershed management
vi. SME projects
vii. Construction
viii. Agriculture and food processing
ix. Healthcare
x. Pharmaceutical

The Indian industry was represented in the following sectors in the conclave:

i. Agriculture and agro-processing
ii. Small and medium industry
iii. Transport and transport infrastructure
iv. Construction, roads and bridges
v. Housing
vi. Power and energy
vii. Water and sanitation
viii. Healthcare
ix. Turnkey projects in the core sector
x. Turnkey manufacturing projects in the private sector
xi. Information and communication technology
xii. Consultancy

The conclave has established itself as a strong platform to project Indian capacities and capabilities to the African markets, and provided an excellent model for partnership between the government and the private sector and gave a strategic thrust to the industry's need for accessing new opportunities for project partnerships with Africa.

Foreign investment in Africa

Africa is known for its natural resources. The high prices of minerals, such as copper, diamonds, gold and platinum and, particularly, oil, along with the consequent improved profitability of investment in natural resources encouraged many transnational corporations (TNCs) in the African region.

Africa's foreign direct investment (FDI) inflows remained at the relatively high levels, rose from US$8 billion in 1995 to US$20 billion in 2004. Although inflows in 2004 were relatively high, Africa's share in world FDI inflows remained small at 3 per cent. Most of the inflows were in natural resource exploitation, spurred by rising commodity prices. The profitability of natural resource exploitation in the region increased, which also induced the TNCs to engage in cross-border merger and acquisitions (M&As) in the primary sector. The composition of FDI inflows in Africa in 2004 was significantly tilted towards natural resources, particularly in the petroleum industry (UNCTAD, 2005).

Inflows rose in 40 out of the 53 countries in Africa and fell in 13, including some of the region's top FDI recipients such as Angola, Morocco and Nigeria. The five top countries for FDI in Africa in 2004 were France, the Netherlands, South Africa, the UK and the USA, together accounting for well over half of the flows to the region.

Among the different sub-regions, North Africa attracted the highest inflows in 2004, with all the countries in the sub-region, except Libya, on the list of the top 10 host countries for FDI in Africa. The sub-region attracted 29 per cent of Africa's total inflows, particularly in oil and gas; Sudan topped the list, mainly as a result of FDI in petroleum from China, India and Malaysia. Oil and natural gas exploitation also contributed to inflows to Algeria and Egypt.

East Africa and West Africa also received higher inflows in 2004, but these inflows declined in Central Africa and Southern Africa.

Rising oil prices contributed to relatively high levels of FDI inflows to the major oil-producing African countries, especially Sudan and Equatorial Guineas. Although FDI inflows decreased in Angola and Nigeria, the levels, nevertheless, remained high in those countries. These four countries, together with Egypt, were the top recipients of FDI to Africa in 2004. With over US$1 billion each in inflows, their combined total amounted to US$8.6 billion (or a little under 50 per cent of Africa's total inflows), while the top ten host countries accounted for 69 per cent in 2004.

In 2004, cross-border M&As in all industries in Africa decreased from US$6427 million 2003 to US$4595 million in 2004, registering a fall of 28 per cent. About 63.5 per cent of the cross-border M&As was related to mining activities and amounted to US$2918 million. Manufacturing amounted to US$1144 million, having a share of 24.9 per cent, and relatively to services sector, it amounted to US$533 million with a share of 11.6 per cent in 2004.

FDI outflows from Africa more than doubled to US$2.8 billion in 2004. About 57 per cent of outflows was the result of cross-border acquisitions by TNCs from South Africa, following an increasingly liberalised outward investment policy in that country. For instance, Anglo Gold (South Africa) purchased Ashanti Goldfields (Ghana), which has major FDI projects in Guinea, Tanzania and Zimbabwe, Gold Fields (South Africa) acquired IAMGOLD (Canada). In another deal, Allied Technologies (South Africa) acquired the Econet Wireless Group of Botswana. TNCs from some other African countries are also investing within and outside the region. Examples include the expansion of all operations of Orascom Telecom Holding (Egypt) into Iraq and other Asian countries, and the expansion of production by Oriental Resources of Nigeria in Chad, Algeria, Egypt and South Africa together accounted for 81 per cent of the FDI outflows from Africa in 2004.

In terms of policy changes, there has been a further wave of FDI-friendly measures and initiatives at the national, regional and global levels to attract more FDI into African countries.

Policy initiatives and prospects in Africa

In terms of policy changes, there has been a further wave of FDI-friendly measures and initiatives at the national, regional and global levels to attract more FDI into African countries. Most of these measures focused on liberalising legal frameworks and improving the investment climate.

Egypt, the Libyan Arab Jamahiriya and Mauritius introduced at least four policy changes each. Among the countries implementing policy reform, Algeria, the Democratic Republic of the Congo, Egypt, Ghana, Madagascar, Mauritania, Tanzania and Uganda generally simplified aspects of their FDI regulations, including through the establishment of more transparent FDI regimes. Nigeria implemented reforms allowing foreign banks to merge with local commercial banks. The Democratic Republic of the Congo and the United Republic of Tanzania reduced the levels of tax and royalty payments. Other specific changes included the adoption in Egypt of an antitrust law as part of a concerted drive to improve the country's business environment, and the announcement by the Central Bank of Zimbabwe of a new guarantee to pay back the entire capital within three months if investors decided to leave.

Many African countries also stepped up their investment promotion efforts in 2004. For example, Egypt initiated a number of investment procedures; it is also reviewing the fiscal regime. In addition, it is restructuring the General Authority for Investment and Free Zones. Similar efforts are under way in Morocco regarding the Investment Directorate. A number of countries, including Egypt, Morocco and Tunisia, are trying to promote their countries as investment destinations through the organization of investors' meetings and annual conferences.

Various bilateral, regional and multilateral treaties were also concluded, which complemented national regulations for promoting FDI. African countries concluded 33 new bilateral investment treaties (BITs) and 15 new double taxation treaties (DTTs) in 2004. These brought the cumulative numbers of BITs and DTTs for the region to 615404, respectively.

The Government of the USA amended key provisions of the African Growth and Opportunity Act (AGOA) in 2004 that allow more flexible rules of origin. From 2005, however, with the ending of the quotas limiting some countries' exports under the World Trade Organization's (WTO) Agreement on Textiles and Clothing (ACT) the preferential advantage provided by the AGOA may not suffice to attract FDI into textiles and clothing. There will be increased competition, especially from Asian countries, the exports of which were previously restricted by the quotas.

In 2004, the Multilateral Investment Guarantee Agency (MIGA) of the World Bank, through its guarantee programme, supported four new FDI projects in power generation, business services, banking and IT services, and undertook 28 technical assistance activities in the region. At the same time, the African Trade Insurance Agency, the region's only pan-African multilateral import and export credit and political risk guarantee agency, adopted measures to protect foreign investors in Africa against trade risks. The region now has better market access [as a result of the Everything but Arms (EBA) initiative of the EU], Japan's 99 per cent rule for LDCs. The AGOA, the GSP, and national policies are more stable. Despite these measures and efforts, African countries' capacity to target FDI strategically in manufacturing and services has been constrained by economic and social factors. Impediments range from small market size and poor regulation to meagre financial resources and low skills.

The continued low levels of FDI in manufacturing in many African countries are explained by two main factors: a failure to move rapidly on developing economic and social policies that are important for FDI inflows (as well as on development in general); and years of reforms in the 1980s that placed insufficient emphasis on capacity building. As a result, the international market-access measures and initiatives provided for African countries have not been very successful in attracting FDI, particularly in manufacturing, given the lack of capacity to exploit FDI in a number of countries. The future of FDI in Africa's development lies in an integrated and genuine partnership between the private sector and governments to strengthen human resource capabilities.

India's investment perspectives in Africa

India is the third Asian country which is rapidly growing in importance as an investment source in Africa. India's investment initiatives have been in the area of fertilizer, cement, pharmaceutical, oil and gas and auto components. Some of the latest investment are seen in these areas.

Illustrating some recent investment initiatives in Africa is India's emergence as the fastest growing investor country in Egypt. While the Japanese and South Korea companies have an established presence in Egypt, Indian companies in textile, fertilizer and cement ventures are driving the actual growth in FDI infusions. Some 82 Indian companies have so far pumped in FDI into Egypt, of which 16 had established a local presence under GAFI regimes. India entered an agreement with Egypt in 1997 for promotion and reciprocal protection of investments (*The Economic Times*, 2006).

Some of the top Indian corporates in Egypt are the Birla Group, which runs the Indo-Egyptian JV; Alexandria Carbon Black; Carbon Black Plant; state-owned IFFCO (Indian Farmers Fertilizer Cooperation), which recently invested in a mega fertilizer venture; the Indo-Rama group, which is involved in a US$160-million chemicals venture with an Egyptian holding company for gas; and the International Financial Corporation (IFC), a multilateral financing agency under the World Bank. The IFC is also all set to pick 5 per cent equity in the IFFCO's US$325-million phosphoric acid plant proposed to be set up in Egypt. The IFC is also the financial adviser to the JV-Indo-Egyptian Fertilizer Company. The Egyptian venture with a proposed installed capacity of 4.50 lakh tonnes of phosphoric acid annually is part of IFFCO's strategy to achieve backward and forward linkages in the fertilizer sector. The IFFCO will enter into a 100 per cent buyback arrangement for the entire production from the newly formed company on a long-term basis.

Egypt's strategic proximity to Europe, North Africa and the oil-rich Gulf Cooperation Council (GCC) comprising Saudi Arabia, Kuwait, Bahrain, Qatar, UAE, Oman and the Republic of Yemen is known among investors throughout the world.

In merely two years, corporate FDI infusions into Egypt have nearly doubled from US$2 billion to US$3.9 billion. It was expected that the FDI inflows in Egypt might scale the US$5.2 billion mark in 2005-06. The thrust has largely come from India and China.

The Ministry of Petroleum and Natural Gas is planning to offer packaged deals, especially for projects in the under-developed regions in the African subcontinent. The package deals would include offers in oil refining, pipelines, power generation and railways. This is being considered because of stiff competition from China. Mauritius is important from this point of view because this country imports around 75 per cent of its primary energy requirements such as oil, natural gas and coal from overseas. This island is located off the south-east coast of Africa, rapidly developed in the last three decades from an economy based on sugar to a greater degree of industrialisation, raising living standards for its people. The country's energy requirements will grow by 5 per cent annually as a result of development in various sectors of the economy, particularly island transportation.

India and Mauritius have agreed to work together in exploring and developing petroleum reserves in the vast territorial waters round the energy-dependent Indian Ocean Island. A memorandum of understanding was signed between ONGC Videsh Ltd and the Mauritius Oceanography Institute. The Mauritius Government is interested in promoting development and production activities of oil and gas in the country. It requires technical cooperation from ONGC. Mauritius will provide ONGC with all available information on hydrocarbon exploration activities in its 1.9 million sq km territorial waters. The ONGC Videsh Ltd will carry out geo-physical and geological studies at target areas within three years and will be exclusively authorized to carry out petroleum operations in those fields (*The Financial Express*, 2006).

Since the beginning of trade relations with South Africa in 1994, many Indian conglomerates have set up ventures in this country from services sector (IT and banking) to manufacturing (automotive, steel, pharmaceuticals). There are about 35 Indian companies presently operating in South Africa which is the most prosperous economy in the African region and offers a ready market.

Some of the major Indian companies that have already invested in Africa are: the Tatas, UB, Ranbaxy, Dr. Reddy's Laboratories, CIPLA, Cadilas, Elecon, Ashok Leyland, Eicher, Kirloskar Brothers, Mahindra & Mahindra, Sahara, etc. In the area of technology and investment the number of Indian companies coming to South Africa and the number of South African companies that have gone into India is worth mentioning (*The Hindu Business Line*, 2006).

The Tatas have chosen to go with Africa in a big way. Their current business interest in Africa covers a vast stretch of that continent from Senegal in the far West to Kenya in the East. Also it has chosen to enter with a number of businesses ranging from steel to horticulture and from automobiles to telecommunication. Tata Telecom is expected to invest US$200 million to start phone services in South Africa. Tata Coffee will partner with Tata Africa and a financial institution for its coffee plant venture in Uganda. The company is planning a 3600 tonne coffee plant in Uganda. Also Tata Chemicals is exploring the possibility of setting up a soda ash unit near Lake Natron, which lies on the border between Tanzania and Kenya (*Business Standard*, 2006).

There are investment opportunities which can help Ghana to strengthen and diversify its industrial production base through Indian joint ventures in the areas of food processing; textiles and readymade garments; timber and wood product; cement plant; exploitation of mineral reserves; and tourism.

Some of the areas, which are being opened for FDI include the services sector, such as telecommunication, transport, tourism, brewing, pharmaceuticals, cement manufacturing, mining, etc. The Government of Ghana has initiated the process to attract private investment both from the national and foreign investors.

Kenya has a liberalised foreign investment protection apart from other investment incentives. The areas offering joint venture opportunities include drugs and pharmaceuticals, sugar, textiles, cement, chemicals, light engineering industry, food and agro-processing, tourism and tourism related industry.

Suashish Diamonds has received a licence from the Government of India to set up a diamond processing unit in Botswana. Botswana is the largest exporter of gemstones and diamonds in the world. The country is a major player in mining diamond, which accounts for half of its revenues (*The Financial Express*, 2006).

Indian and African public and private sector companies are emerging with a view to facilitating joint ventures, technology transfer, supply of equipment, consultation and advisory services. Focus markets and focus products schemes would help increase trade prospects with most of African countries. A country like South Africa and products like diamonds, semi-precious stones, gold, silver, ores and concentrates, cereals, sugar, and crude and petroleum-based products would be excluded (Ministry of Commerce & Industry, 2005).

India may face competition from China. China's government will encourage companies to invest in Africa to boost the supply of raw materials and encourage growth and development on the African continent. China's relations with Africa is a cornerstone of China's foreign policy. China's trade with Africa is worth US$39.8 billion and imports worth US$21.1 billion. Despite such challenges, India is set to extend the unilateral trade preferences scheme to all the LDCs of Africa. This scheme is about unilateral offer of tariff concessions and easing other restrictions on trade to give market access to at least 34 LDCs of African continents (FICCI, 2005).

There is a commitment to effectively integrate the LDCs into the multilateral trading system, as reaffirmed at the sixth WTO Ministerial Conference held in Hong Kong, December 2005. Building on the commitment of the Doha Ministerial Declaration, the developed and developing countries agreed to implement duty-free and quota-free market access for products originating from LDCs by 2008. Countries also agreed to take additional measures to provide effective market access, both at the border and otherwise, including simplified and transparent rules of origin, and to give priority to sectors and modes of supply of export interest to LDCs. These LDCs will be required to undertake commitments and concessions only to the extent consistent with their individual development, financial and trade needs and their administrative and institutional capabilities. Private-sector development strategies would help in industrial development of African countries that take them to build up social and technological capabilities. It is crucial for the international community to help them meet their capacity-building needs including those related to trade.

References

- China to boost Africa investment (2006, June 23). *The Financial Express*. p. 2.
- Destination Africa: India's Vision (2005, July). Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi.
- Dutt, I.A. (2006, March 7). Tata Coffee to set up plant in Uganda with Tata Africa. *Business Standard*.
- Economic and Social Survey of Asia and the Pacific (2006): *Energizing the Global Economy*. UN ESCAP, New York.
- Focus Africa: A programme for developing and enhancing India's trade with Africa, *2004-05,* Ministry of Commerce and Industry, New Delhi.
- Focus Africa: A programme for enhancing trade with the Sub-saharan region (2002, April 1), Ministry of Commerce and Industry, New Delhi.
- Foreign Direct Investment (2005), UNCTAD, Geneva.
- Goenka. R.A. (2005, September). Kenya International: The Gateway to East Africa. *The Financial Express*. pp. 1-4.
- India-Africa Conclave (2005, December). Eximius: Export Advantage.
- India to help Mauritius hunt oil & gas (2006, March 14). *The Financial Express*. p. 9.

- Industrialisation, Environment and the Millennium Development Goals in sub-Saharan Africa -The new frontier in the fight against poverty (Industrial Development Report 2004). (2004, June). UNIDO, Vienna, Austria.
- Parbat, K. (2006, May 17). Indian investment on the rise in Egypt. *The Economic Times*.
- Pathak. M. (2006, April 28). Tata Chemicals likely to set up Soda Ash Unit in Tanzania. *Business Standard*.
- Patterns of Africa-Asia Trade and Investment: Potential for Ownership and Partnership (2004, October). World Bank, Washington, USA. pp. 1-6.
- Recent Economic Developments in West Africa: An Overview (2006, March), *Eximius: Export Advantage*. p 3.
- Sampathkumar, D. (2006, May 15). Out of Africa: penetrating overseas markets: A case study of the Tata’s Foray into Africa. *The Hindu Business Line,* p. 13.
- Sharma-S. N. (2006, April 27). Growing by leaps and bounds. *The Economic Times* (A Times Global Report), p. 1.
- Study on promotion on India’s trade with sub-Saharan African Countries (2001). Indian Institute of Foreign Trade (IIFT), New Delhi.
- Suashish diamond received centre’s nod for African unit (2006, June 23). *The Financial Express*.

Strategic Marketing for Higher Education

Abstract: *Institutions of higher education, such as colleges and universities, are facing an increasing competition for students and financial resources that challenge their ability to survive into the twenty-first century. It is predicted that quantitative measures, such as enrolment and development growth, will no longer be treated as indicators of institutional quality. The qualitative dimensions related to the ability of institutions to adapt to the changing economic, social and customer needs and expectations will be the indicators of their growth. Other parameters, such as a creative mix of technology, ease of access and new learning paradigms to satisfy needs of the new clientele will also indicate their growth. Those institutions that succeed in the twenty-first century will do so for a number of reasons, but one factor may be their ability to plan and successfully execute marketing strategies and make realistic adjustments in plans and programmes consistent with the institution's purpose and mission. In this research paper I have tried to find out the various facts related to the growth, problems and prospects of strategic marketing in some institutions of higher education vis-à-vis the commitment level of top management for the growth of the respective institutions.*

P.Kameswara Rao*

Introduction

THE traditional population of higher education students is changing. Many institutions have, out of necessity, broken their historic paradigm of focusing only on, on-campus students by using alternative delivery methods and technology to make education accessible to non-traditional market segments. The contemporary consumer mix more often includes first time students, continuing adult students, and adults with short-term goals to re-tool or reposition their skills to maintain their position in the workplace. There is a change in the interest of the students in the available post-secondary options, such as institutional sectors, fields of study and careers. This change itself will play an important role in institutional development and survival.

The administrators and the faculty of independent colleges and universities can influence the adaptation of their institutions to the changing environment. In the future, while many of these institutions will extend traditional approaches and policies in a new direction, others will seek means to enhance the adaptation of their institutions according to the changed scenario.

The changed scenario would require a shift of vision, which encompasses coordinated systems that are customer centred. Central to this vision is the role of institutional leadership, such as Chancellors/ Vice Chancellors (Kotler, 1995). The more effective Chancellors will most likely be those who proceed with the difficult task of transforming the culture of the institution to be sensitive and responsive to the changing needs of its internal and external stake-holders. Some Chancellors will employ marketing strategies and programmes to meet articulated institutional goals, such as growing enrolments and endowments, attracting higher quality students and improving retention rates. Others would simply want to maintain their existing size but focus on improving the quality of education. All will necessarily confront the need to share leadership and responsibility for change with those closest to the customers, faculty, staff and current students. The realities are that all policies would be different as a consequence of change in the environment and the educational marketplace.

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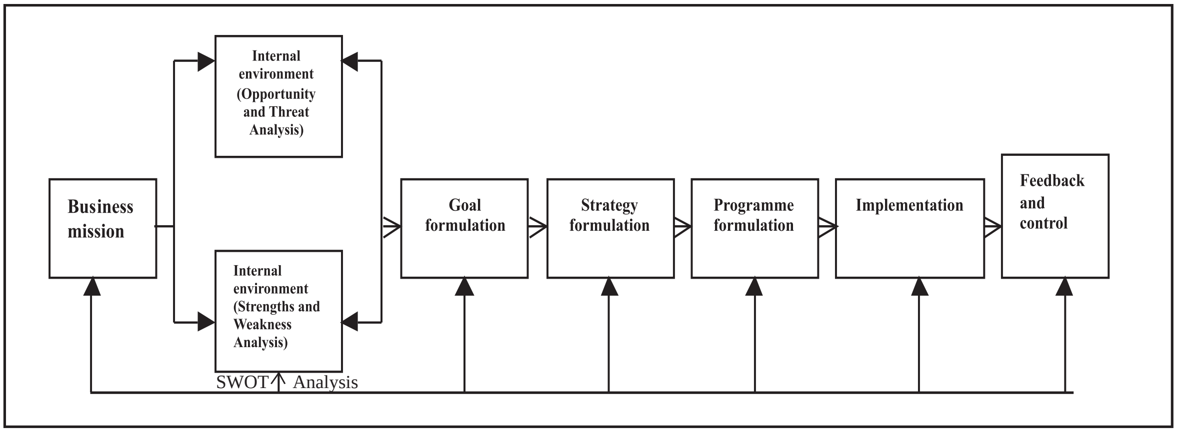

Figure 1. The business strategy planning process

Purpose of marketing strategies

The purpose of marketing strategies in higher education is to provide a rational and planned methodology to recognise, anticipate and react to the market changes. Marketing is the proactive management of the relationship between the institution and its various markets using the tools of marketing, i.e., product, place, price and promotion. Marketing is not a panacea to be considered when enrolments are in steady decline and the continued viability of the institution is in question. The fundamental questions for every stakeholder involved in institutional planning is: 'To what extent do we want to intervene and influence the destiny of our institution rather than be reactive to the environment?' and 'What marketing practices and programmes are most effective?'

As shown in Figure 1, be it a business unit or an educational institution, the Vice-Chancellors must have a mission followed by SWOT analysis. This analysis would lead to the goal formation, strategy formulation, programme formulation, implementation and feedback and control.

Our research shows that the concept of marketing in colleges and universities remains an unclear product of a naive understanding of the real meaning of marketing. In fact, results indicate that after a full decade of discussions on the merits of strategic planning and marketing in higher education, the actual behaviours still reflect a bias toward the promotion and sales activity at the expense of good market research and product development.

Marketing for small colleges and universities has historically been interpreted as synonymous with the admissions brochure. The management and operational techniques in areas such as budgeting, information systems, personnel and finance have been modelled on the business world and refined, but marketing has not been readily or uniformly accepted. In the college and university environment, marketing has been viewed as selling and advertising, both of which border on being unethical in the academic world. Most college administrators believe that industrial-type marketing cannot or should not be incorporated into educational management. They believe that colleges and universities should take a passive and not active stance toward marketing.

Literature review

Adams and Bumgardner (1998) had opined that colleges and universities face an uncertain future and many may be in danger of major restructuring if not extinction and the competitive intensity for students and financial resources will challenge the ability of many small colleges and universities to survive into the twenty-first century. It was identified by Andrade (1998) that effective planning require wide stakeholder participation and dialogue and further opined that there is a large scope for institutionalised strategic planning in the higher education institutions.

Strategic goal is a must for any institution with an inspirational agenda to empower the employees in the institution (Austin, 2002). There is no single distinction for strategic planning; however most processes contain at least the common elements of predefined process; collaboration on process and outcome implementation; and a system for evaluating vision, mission, values and goals (Beckham, 2001). Beckham examined a healthcare board's role in creating a strategic plan. He described the role of the chair as leading the strategic committee while the chief executive officer should ensure the development of strategic direction, drive the implementation and participate in the committee meetings. He also suggested that the following mix of participants should comprise the strategic planning committee: four non-physician trustees, three to four physicians who may or may not be trustees, up to five members of executive management including the chief executive who serves as a voting member. He discussed what should take place inside and outside of the committee, emphasising the need for strategic planning to be a group effort. He added that maintaining confidentiality within the boardroom is crucial.

The introduction to the strategic planning process for boards, staff and chief executives is provided in a 25-minute video where association management is explained. The presentation covers the staff-driven versus board-driven approaches to planning; the benefits of planning; obstacles to the process and how to overcome them; the need for board involvement; and steps in the process itself (Binder, 1999).

Brazziel (1990) had explained that the traditional population of higher education students is changing. According to Cerny, (1992) many institutions have, out of necessity, begun using alternative delivery methods and technology to make education accessible to non-traditional market segments. It is identified that students and adults with short-term goals tend to re-tool or reposition skills to maintain their position in the workplace.

Cope and Delaney opined that market segmentation is an important topic for higher education researchers and administrators and they explored the relative importance that the prospective students attach to various benefits offered by a medium-sized private university with moderately selective admissions criteria.

Universities have been forced to pay more attention to the utilisation of marketing techniques in their recruitment process due to the sharp decrease in the number of high school graduates (Crane and Turner, 1989). There is a need for strategic enrolment management and planning marketing higher education (Dolence *et al.*, 1987). There is also a need for a diagnostic technique for formulating marketing strategies in higher education based on relative competitive position (Dolinsky and Quazi, 1994). At the time of admissions itself proper care should be taken by private educational institutions assess their recruitment effectiveness (Gans, 1993).

Maintaining the standards of admissions and the use of key marketing techniques would be much more useful (Goldhegn, 1989). Weightage should be given to the marketing aspect of enrolment management (Grove, 1992). Effective integration of marketing into college planning is necessary (Hatton and Sedgmore, 1992). There is a need for integrated marketing communications for colleges, universities and schools (Johnson, 1989).

The institutions in the private sector should not neglect strategic marketing either in non-profit organisations or in educational institutions. (Kotler, 1995). Before going for strategic marketing there is a need for identifying the benefit segments among prospective college students. Only then the institution would be in a good position to go ahead with its strategic marketing activities (Miller *et al.* 1990).

Marketing is no longer a bad word for the universities because in the present competitive world there is the need for marketing everywhere and educational institutions are no exception (Strang, 1986). In a recent article in *The Hindu* (2007) it was stated that there is a need for 1500 universities in India by the year 2015. Therefore, there is a need for organising for marketing, especially in the field of higher education (Topor, 1994). Also it is a must to have proper marketing strategies for the universities in the private sector with low endowment (Wallingford and Berger, 1993).

Study methodology

The purpose of this study was to assess the relationship of the Chancellor/Vice-Chancellor's role in shaping and implementing strategic marketing among the independent colleges in India. We wanted to evaluate how well the strategic marketing functions were incorporated by the current leadership of independent colleges. We also wanted to see how the role of the institution's Chancellor/Vice-Chancellor might be related to the presence of strategic marketing initiatives and programmes.

Data for the study

The data for the study reported here were collected from the following sources:

i. Standardised data sets/Questionnaires;
ii. Survey of Chancellors/Vice-Chancellors/Chairmen/Presidents of participating institutions;
iii. On-site interviews and observations at four case study institutions;
iv. Secondary sources like newspapers and the Internet.

These primary and secondary sources of institutional information provided the data used to study the relationship between marketing strategies, practices and initiatives with measures of institutional performance. Primary data were acquired from the presidential survey instrument. The survey instrument was constructed to elicit the presidential perspectives and to define the institutional performance measures. A total of 205 independent colleges and universities in India were selected for the study. The institutions targeted by the study represented a segment of the higher education institutions—private, independent colleges and universities/deemed universities.

Sampling technique

Simple random technique was used in the existing list of colleges/universities across the country. The decision to survey the Chancellors/Vice-Chancellors was on the presumption that the development of a coordinated marketing strategy depends on a commitment from the central institutional administrative leadership and effective integration of academic and student service units. Chancellors/Vice-Chancellors of ninety-eight private, independent institutions have been selected for the study responded to the survey.

Current research does not explain whether a relationship between the strategic marketing planning and the commitment levels of heads of institutions exists for the consistent growth of these institutions. Opinions vary within the institutions on the need for a strategic marketing plan. As a result, the secondary analysis presented in this thesis attempts to answer the following eight research questions (RQ):

RQ1: What is the level of commitment of the heads of the institutions on marketing of higher education?

RQ2: Is there a significant relationship between commitment of Vice-Chancellors in strategic marketing planning and growth of the institution?

RQ3: Is there a significant relationship between commitment and the presence of a written marketing plan?

RQ4: Is there a significant relationship between growth of the institution and the presence of marketing committee?

RQ5: Is there a significant relationship between retention of enrolments and use of an outside marketing consultant?

RQ6: Is there a significant relationship between the growth of the institution and the oversight of institutional marketing plan by a board of trustees/directors.

RQ7: Is there a significant relationship between information/counselling and increase in enrolments?

RQ8: What significant variable like course delivery, organisation and course development best predicts the success of the institution?

Hypotheses

H1: There will be a moderate level of commitment of the heads of the institutions on marketing of higher education.

H2: There will be a significant relationship between commitment of Vice-Chancellors in strategic marketing planning and the growth of the institution.

H3: There will be a significant relationship between commitment and the presence of a written marketing plan.

H4: There will be a significant relationship between the growth of the institution and the presence of a marketing committee.

H5: There will be a significant relationship between retention of enrolments and use of an outside marketing consultant.

H6: There will be a significant relationship between growth of the institution and the oversight of institutional marketing plan by a board of trustees/directors.

H7: There will be a significant relationship between information/counselling and increase in enrolments.

H8: The success of institution depends on course delivery, organisation and course development?

Profiling a marketing-focused institution

The concept of marketing explains that the key to achieving institutional goals consists of determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than the competitors. Our presumption was that the President, as the driving force of institutional culture and direction, is responsible for developing a marketing-oriented environment that is pervasive throughout the institution. A pervasive marketing climate also requires a major cultural shift in the breadth of participation in planning and communication than has been the case in many institutions. The following factors will provide the distinguishing profile of a market and customer-focused institution.

The President/Vice-Chancellor is expected to be actively involved in providing institutional marketing leadership. The President must personally exemplify strong commitment to a marketing culture. The Vice-Chancellors personally involve themselves in areas they consider strategically or operationally important to their institution. The Vice-Chancellors, in this study, were asked to consider a list of nine selected marketing practices and identify those that got their personal approval. The areas reserved for the President's final approval were considered most important. Chancellors personally ranked approving the plans of admissions and development the highest.

These practices likely ranked higher than others because the Chancellors viewed the students tuition and admission funds as vital in providing the revenue stream necessary to support the continuing operations of the institution. When the Vice-Chancellors were personally involved in the areas of planning, strategy development, initiating marketing research studies and approving printed promotional materials, there was evidence that the institutional performance improved. The mean values of the performance measure of the ratio of student inquiry to student application were higher for the Vice-Chancellors who reported providing final approval of printed materials. A significant relationship was found between these two variables. The Vice-Chancellors who rated coordinating their institution's marketing strategy high in importance realised measurable gains in conversion rates of student inquiry to student application and consistently ranked in the top quartile of this measure of institutional performance. By comparison, the Vice-Chancellors who did not rate coordinating their institutions marketing strategy high in importance ranked in the bottom quartile. The marketing process is integrated to reflect, recognise and involve all institutional stakeholders.

For higher education institutions to embrace and receive a full measure of value from embracing a marketing orientation they must understand that marketing is a culture, which must be pervasive throughout the institution. This means having a clear appreciation for what marketing comprises and what it can do for the institution. The institution-wide marketing orientation involves developing a marketing attitude, sharing of expertise, building commitment and good communications in individuals.

All institutional stakeholders must understand, support and enable marketing strategies to ensure the integration of operational responsibilities at every level within the institution. Distribution of the marketing plan to the various stakeholders within the institution is an effective method of communication and represents an excellent way to build commitment. Marketing plans in this study were well distributed among top institutional officers but less often to other institutional stakeholders. Less than 30 per cent of the Vice-Chancellors reported distribution of marketing plans to deans, department heads, faculty, staff, alumni or student government officers. Participation in writing the institution's marketing plan brings shared expertise, commitment from participants and assists in communicating the plan throughout the institution. It was clear from survey responses that institutional planning was top down in participation.

Top officers representing key administrative areas were most likely to assist in development of marketing plans. Slightly more than 50 per cent of the responding Vice-Chancellors reported involving a faculty representative and only 31 per cent reported involving an academic dean in the planning process. The mean values of retention rates were both higher as well as significant when academic deans participated in writing marketing plans.

Marketing consultants from outside universities are used to build and enrich the institutional marketing culture. Consultants from outside can be used to analyse local problems and assist in designing and organising marketing strategies and programmes. They can provide new ideas for an institution to consider when developing marketing initiatives. They can provide legitimacy for changes an institution wishes to make. Over two-thirds of the responding Vice-Chancellors reported using an outside consultant. Generally, Chancellors who reported using an outside consultant were more likely to employ marketing strategies, programmes and initiatives. An outside marketing consultant's impact on institutional planning was most evident in the areas of institutional planning. Chancellors who reported using an outside consultant were more likely to have a marketing committee and a marketing plan to provide marketing direction than those who reported not using outside consultants.

Institutions conduct regular and structured marketing research studies of all important stakeholder areas. They must obtain information on stakeholder needs and gather marketing intelligence to help satisfy these needs efficiently. Every marketing decision poses unique needs for information, and relevant marketing initiatives can be developed based on the information gathered through marketing research. The presence of marketing research studies or programmes to monitor change in the external environment is primary in the development of marketing strategies and programmes.

Marketing research was not well-developed in the independent colleges and universities studied. The Vice-Chancellors reported they were most likely to focus marketing research studies on current and prospective students and least likely to research on their own faculty and staff. Independent institutions were dependent upon alumni and donors for endowment and operating funds. The percentage of Vice-Chancellors reporting researching these two stakeholder areas was below 60 per cent. The percentage of Vice-Chancellors reporting conducting marketing research studies on parents (38 per cent) and high school counsellors/principals (28 per cent) was also lower than expected. Clearly, the bias was on the prospective students.

Although the mean institutional retention rates for the Vice-Chancellors who reported conducting marketing research studies on current students were higher than those reporting not conducting marketing research studies on current students, no significance was found. While over 82 per cent of responding Vice-Chancellors reported conducting marketing research studies on prospective students, the mean values of the ratio of the students admitted to the students enrolled were not significantly related. Although the mean value of the ratio of students admitted to students enrolled appeared higher for those Vice-Chancellors who reported conducting marketing research studies on high school counsellors, no significance was found. Most Vice-Chancellors reported that marketing research studies on new students was important, but Chancellors who forecast an increase in enrolment of above 15 per cent by the year 2007 were more likely to conduct research on this important market segment.

A marketing-oriented planning culture exists that includes participation from all stakeholder areas. Scanning an institution's various environments for trends is at the heart of planning. Making important decisions would be easier if Vice-Chancellors could correctly anticipate the environment and its impact on student enrolment. Higher education Vice-Chancellors often make two types of errors. First, many Vice-Chancellors wait for events or trends to fully emerge before incorporating them in their planning. Second, many Vice-Chancellors incorrectly assume that the past correctly forecasts the future.

Marketing planning is a natural outgrowth of higher education's concern for the allocation of limited human and financial resources in cash-constrained environments. Opportunities differ in the different markets of an institution. A central concept of marketing planning is that institutions be strategically defined to take maximum advantage of such opportunities and that missions must be assigned consistent with the differences among them.

Marketing planning

Market planning describes the process of planning that is built on sound assessments of market opportunity and institutional capability and involves the development of the institution's total strategic approach to its various markets.

In this research it was found that less than 20 per cent of higher education institutions had written marketing plans to provide overall marketing direction to the institution. Less than half of the Vice-Chancellors in this study also reported no marketing plan. This study found that the presence of a written marketing plan was associated with an overall higher level of institutional marketing. The Vice-Chancellors who reported the presence of a marketing plan were also likely to have retention, recruitment, home visit and campus visitation plans than were those who reported not having a marketing plan. The Vice-Chancellors who reported the presence of a marketing plan were also more likely to conduct marketing research studies (these relationships were significantly related). This suggests that institutions are using the results of marketing research studies to assist in the planning effort.

Higher levels of retention are evident when institutions have a marketing committee. The mean values of retention rates were both higher as well as significant for the Vice-Chancellors reporting the presence of a marketing committee. Marketing evaluation systems are in place to assure continuous monitoring and improvement of marketing programmes and strategies. Marketing research studies and marketing plans focus on assessing institutional strengths and weaknesses against the backdrop of evolving opportunities, and results in a determination of the institution's ability to fill these opportunities, their relative attractiveness, and ways and means of taking advantage of them.

Institutions typically implement more than one marketing strategy. Different strategies target different markets. These strategies embody ways in which institutions take advantage of market opportunities, and are employed to meet institutional objectives. Improving student retention and recruiting new students are clearly top goals of every institutional President. Marketing strategies and programmes focus on the attainment of institutional objectives and periodic assessment provides validation of the success or failure of marketing strategies. Over 81 per cent of the responding Vice-Chancellors reported the presence of a written recruitment plan to attract potential students, but less than 60 per cent of Vice- Chancellors reported the presence of a written retention plan as a strategy to improve student retention and graduation rates.

Two-thirds of the responding Vice-Chancellors reported conducting marketing research studies on their current students. Because matriculated students renew their enrolment decision every term and the costs of attrition are substantial, the Presidents considered retaining students nearly as important as attracting new students. Nearly 64 per cent of the Presidents who reported the presence of a marketing plan indicated that they also had a retention plan. The mean retention rate reported by the Vice-Chancellors in this study was 59.33 per cent with a standard deviation of 15.46 and a range of 85. This wide variance suggests that either the Vice- Chancellors did not know the retention rate of the students or some institutions were actually retaining only 15 per cent of their students. The Vice-Chancellors who reported retention rates in the top quartile were more likely to employ important marketing practices. They were more likely to focus on planning and to conduct marketing research studies on various institutional stakeholders. Once a student is admitted, the institution makes an effort to persuade the student to enrol. Therefore, the goal is to convert admitted students to enrolled students. The mean admission to enrolment rate for institutions in this study was 50.78 per cent with a standard deviation of 18.57. Once again this wide variance suggests that either the Vice-Chancellors did not know their admission to enrolment conversion rate or some institutions were actually converting only 26 per cent of their students while others were converting 95 per cent. A relationship between the conversion rate of students admitted to students enrolled and various marketing initiatives was expected.

Twenty-two marketing practices, strategies and programmes from the survey were examined for significance. Only one practice was found and that was the admissions personnel who were trained in marketing. The choice is at the heart of marketing and institutions must understand the process consumers use to decide what and when to buy their education. Before the students submit an application to an institution they must have some level of awareness of the institution. The goal of admissions is to convert these initial inquiries into completed applications. The Vice-Chancellors did not know their inquiry to application conversion rate or some institutions are actually converting only 4 per cent of their students while others are converting 84 per cent. Less than 15 per cent of the responding Vice-Chancellors reported conversion rates above 50 per cent. A significant relationship between the conversion rate of student inquiry to student application and various marketing initiatives was expected.

There are 16 variables studied under the four heads:

i. Information and counselling;
ii. Course development;
iii. Course delivery;
iv. Organisation.

As per Figure 2, four significant factors were found from various marketing practices, strategies and programmes examined:

1. Presence of a written marketing plan;

2. Presence of a marketing committee;

3. Use of an outside marketing consultant;

4. Board of trustees/directors have oversight of institutional marketing direction.

Areas	Conditions and constraints	Implementation	Results	Follow up
Information and counselling	1 External constraints Organisation Partners	2 Channels Content	3 Student body Other results	4 Evaluation Customer reactions
Course development	5 External constraints Organisation Target group Staff Partners	6 Supervision, co-operation Follow up and guidance of authors Choice of media Formative evaluation	7 Course description Material meeting requirements Teaching aids Customer reactions	8 Evaluation Customer reactions Updating and/or revision
Course delivery	9 External constraints Organisation Students Materials Teachers Partners	10 Two-way contact Teaching and guidance Exams and tests	11 Students' achievement of goal Course completion Learning results	12 Evaluation Customer reactions
Organisation	13 External constraints Organisation Partners	14 Management Communication Future orientation	15 Achievement of goals Financial results Repute	16 Evaluation Reporting

Figure 2. Overview of quality areas in the strategic marketing planning and quality factors

The Vice-Chancellors who reported conversion rates below 15 per cent were more likely to focus on various planning strategies to aid in improving this important measure of institutional performance. Individuals in key institutional areas are formally marketing trained. Individuals academically or experientially trained in marketing are more likely to understand and successfully implement marketing strategies. Forty-eighjt per cent of the responding Chancellors reported their admissions personnel were marketing trained and 34 per cent reported their development personnel were marketing trained. Marketing training of the admissions staff makes a difference in recruiting prospective students. The mean values for the ratio of students admitted to students enrolled, and the ratio of student inquiry and student application was both higher and statistically significant when admissions personal were marketing trained.

Recommendations

Broad stakeholder participation in planning brings shared expertise, commitment from participants and assists in communicating the plan throughout the institution. The results from our presidential survey and the case studies indicated that institutional planning was top down in participation and results were poorly communicated to stakeholders. The Vice-Chancellors should consider broadening the involvement of stakeholders in institutional planning. Marketing decision-making at independent colleges and universities should be information driven. The results from our survey and the case studies indicated that marketing research was not well developed. Marketing research should become a structured and routine activity at independent institutions.

This study examined marketing strategies and initiatives at independent institutions in India. The results of the research indicated a significant relationship between measures of institutional performance and admissions personnel who were trained in marketing. Considering this finding an institution's key decision-makers (administration, faculty and staff) should be trained in marketing. They have widely varying backgrounds and are often physically and organisationally remote from one another. The distribution of the institution's planning efforts needs to be expanded.

As they implement their strategy, institutions need to track the results and monitor new developments in the internal and external environments. One thing that higher education institutions can count on that their environments will eventually change. And when they do, institutions will need to review and revise their implementation, programmes, strategies, or even objectives. Institutions should develop a system to evaluate and provide feedback of the effectiveness of the institution's planning system.

Our research found that strategic planning and marketing among and within independent colleges was no more disciplined or sophisticated than that found among various state universities in the year 2006. The opportunity for improving the direction and efficacy of many institutions of higher education still remains for those who would implement a truly integrated strategic marketing initiative.

The Vice-Chancellors need to understand the 10 commandments in strategic planning of higher education are described below:

1. Who are your customers (and who are not). Be sure to identify 'customers' in broad ways; current students, potential students, students you have lost (to attrition), faculty, administrators, staff, alumni, firms in the area and employers elsewhere who often take your students, and all the people who relate to your academy.

2. Why did the students select you and why have they stayed with you. Your current 'customers'

are the best indicators of your successes (and failures). What attracted them to your institution to begin with? Despite the weaknesses you have already identified why do they still stay with you? What advantages did they find to offset the disadvantages every school has?

3. Why did your former applicants select and then reject your academy? Which weaknesses did they find repelling and were discouraged from continuing at your institution?

4. Who are the admission prospects that left and why did they select another school? The best way to understand your school is to talk to those who rejected your offers. What were they looking for that your institution did not provide? What did the other school have that attracted them to it instead?

5. Identify the 'kinds' of applicants you will want to pursue over the next 12-18 months; and along with that, identify what those applicants will be looking for in educational opportunities. What is the demographic, intellectual, and aspirational profile of your 'ideal student?'

6. Identify specific prospect-targets (hot, warm, cool) you would want to pursue in the near future. These targets should cover the breadth of your institution: admissions, fund raising, alumni, internal (faculty, students, parents, friends), and external. Determine how they fit into your institution's mission and goals. Is it possible that you have been reaching for the wrong targets?

7. Identify the prospecting and courting techniques you will use, as well as promotional materials you will need (from power point demonstrations on a laptop to collateral brochures, high school visits, participation, etc.). How will you highlight those strengths you identified?

8. Are there other strengths you have been ignoring? How can you add those to your repertoire of recruiting methods?

9. Pay close attention to technology and implications for distance education, website development and maintenance and communications within and outside the institution. The key to the future is technological. Be sure you not only have the equipment, knowledge, and resources to take advantage of it, but know how you plan to emphasise these in your recruitment strategy?

10. Which team of faculty members is playing college politics? How do such politics hamper the growth of genuine faculty and students?

Conclusion

In our view there is no comprehensive survey data available on 'Understanding of Private Higher Education in India' from the stakeholders perspective as well as the heads of various institutions chosen by us. The satisfaction levels of the students and parents who access educational services from various types of higher education institutions has not been measured so far. Similarly, the corporate sector's voice, which recruits graduates from various institutions, also needs to be heard to analyse the implications of privatisation. This survey, while benefiting from some of the secondary literature on the subject, does not draw any inference thereon. The review of the secondary literature helped in framing hypotheses as highlighted in the study. The viewpoints of various heads of the institutions, such as the Vice-Chancellors/ Registrars, etc., have been taken into consideration. A point to be noted here is that private sector higher institutes in the study refers to self-financing colleges, private universities and deemed universities. Finally, it is felt that there is a need for continuous research in this area.

References

- Adams, M. F., & Bumgardner, L. G. (1998). The role of public relations in a successful fund-raising campaign. *Journal of Marketing for Higher Education,* 3(2), 169-75.
- Andrade, Sally J. How to institutionalise strategic planning: Effective planning requires wide stakeholder participation and dialogue. *Planning for Higher Education* Vol. 27, no. 2 (Winter 1998-1999): 40-54. (See http://www.scup.org/pv27n2.htm) http://ispt.sdccd.edu/millennium_andrade.html
- Austin, William J. (2002) *Strategic planning for smart leadership: Rethinking your organisation's collective future though a work-book based, three-level model* Stillwater, OK: New Forums Press, Inc. pp. 9-10. (http://www.wfs.org/futuringbib.htm)(http://www.wfs.org/revaustin.htm)
- Beckham, Dan. (September 2001). Strategic planning and the board: The responsibility to plan the future. *Trustee* Vol. 54, no. 8: (http://www.agb.org/wmspage.cfm?parm1=101)
- Binder, Elaine Kotell. (January 1999). Being strategic: What it takes for a board to plan and make decision-strategically. *Association Management* Vol. 51, no. 1: 63-65.
- Brazziel, W. F. (1990). Marketing small-college continuing education. *Journal of Marketing for Higher Education,* 3(1), 141-49.
- Cerny, E. (1992). Marketing techniques employed by private liberal arts colleges. *College and University,* 67(3), 215-221.
- Cope, R. & Delaney, G. (1991). Academic program review: A market strategy perspective. *Journal of Marketing for Higher Education,* 3(2), 63-86.
- Crane, P., & Turner, L. (1989). Searching for soulmates. *Currents,* 15(2), 42-48.
- Dolence, M. G., Miyahara, D. H., Grajeda, J., & Rapp, C. (1987-1988). Strategic enrolment management and planning marketing higher education: Using a situation

analysis to identify prospective student needs in today's competitive environment. *Planning for Higher Education,* 16(3), 55-74.

- Dolinsky, A. L., & Quazi, H. A. (1994). A diagnostic technique for formulating marketing strategies in higher education based on relative competitive position. *Journal of Marketing for Higher Education,* 5(2), 89-101.
- Gans, W. (1993). *Admissions recruitment effectiveness in private four- year colleges and universities private higher education.* (unpublished doctoral dissertation), The University of Michigan.
- Goldhegn, L. A. (1989). Admissions standards and the use of key marketing techniques by United States' colleges and universities. *College and University: The Journal of the American Association of Collegiate Registrars,* 65(1), 44-55.
- Grove, J. (1992). The marketing aspect of enrolment management: Evaluating the impact on recruitment and retention in institutions of higher education. *Journal of Marketing for Higher Education.*
- Hatton, A. & Sedgmore, L. (1992). *Marketing for college managers: A workbook for the effective integration of marketing into college planning.* 142.
- Johnson, B. (1989). Student recruitment: Have we gone too far? *The Journal of College Admissions,* 25-28.
- Kotler, P. (1995). *Strategic Marketing for Educational Institutions.* New Jersey: Prentice-Hall, Inc.
- Miller, P., Lamb, Jr. C. W., Hoverstad, R., & Boehm, E. G. (1990). An approach for identifying benefit segments among prospective college students. *Journal of Marketing for Higher Education,* 3(1), 49-64.
- Strang, C. (1986). Marketing no longer dirty word to universities. *Marketing News,* 20, 23.
- *The Hindu* (2007, Jan. 2).
- Topor, B. (1994). Organizing for marketing. *Marketing Higher Education,* VII (7), 1-8.
- Wallingford, H. P., & Karen Berger. (1993). Marketing strategies for a low endowment private university in the 1990's. *Journal of Marketing for Higher Education,* 4(1/2), 325-338.

Understanding the Agreement on Agriculture under World Trade Organisation

Abstract: *Trade distortions are present in the international market due to the subsidies being provided to the farmers in the developed countries. These subsidies mean that the industrial countries are dumping food exports into developing countries at alarming rates. The developing countries cannot afford to pay direct subsidies to their farmers and, consequently, they are at a tremendous disadvantage in the open market. The aim of the Agreement on Agriculture (AoA) under World Trade Organisation (WTO) was to encourage fair trade in agriculture by removing trade distortions and eliminate all restrictions on the free trade of agriculture products in the international market. It envisaged a phased reduction in various kinds of support being given to agriculture by the member countries. However, it has been unsuccessful in achieving its goals till date. Several factors, such as, domestic support, export dumping and market access are important in ensuring the success of the Agreement on Agriculture. This study explores the reasons for its ineffectiveness and suggests measures to successfully implement it with effective results.*

Anil P. Dongre*

Introduction

THE World Trade Organisation (WTO) is the legal and institutional foundation of multi-lateral trading system. It is a platform on which trade relations among countries evolve through debate, negotiation and adjudication. It was proposed to set up the International Trade Organisation (ITO) along with the World Bank and International Monitory Fund (IMF) on the recommendation of the Bretton Woods conference in 1944. The ITO was not set up but in its place the General Agreement on Tariff and Trade (GATT) was established by the US, UK and some other nations in 1947 and it was thought that GATT would facilitate the negotiations for the ITO.

The WTO is based in Geneva, Switzerland. The WTO agreement contains some 29 individual texts covering everything from agriculture to textile. Given the provisional nature and limited field of action, the success of the GATT in promoting and securing the liberalisation of world trade over 47 years was phenomenal. Continued reduction of tariff was significant, but the glory was not for long. After the limited achievement of the Tokyo round, the high rates of unemployment and constant factory closure led governments in Europe and America to seek bilateral market sharing arrangements (Paul, 2005).

Structure of the WTO

The WTO was established with the same objectives that were behind the proposal for setting up the ITO in 1945. The WTO was established in January 1995 to bring all international trade under a single regulation and safeguarding of the international agreement on trade and service and intellectual property rights (IPR). The old GATT system was allowed to continue under what was known as the 'Grandfather Clause'.

Its highest authority - the Ministerial Conference - dominates the structure of the WTO. This body is composed of the representatives of all WTO member nations. It meets every two years and is empowered to make decisions on all matters under any of the multilateral trade agreements (Ashwathappa, 2006).

The day-to-day work of the WTO is entrusted to a number of subsidiary bodies, principally the General Council. It operates through the Dispute Settlement Body (DSB) and Trade Policy Review Body (TPRB). The Director General is the Chief Executive Officer and he is assisted by a secretariat and his tenure is for four years. Four Deputy Directors from different member nations also assists

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him. Further, he has three councils to advise on: (i) Trade in goods, (ii) Trade in services and (iii) Trade related aspects of intellectual property rights. The trade review body has three committees to assist it, namely, the Committee on Trade and Development (CTD), the Committee on Balance of Payment Restriction (CBOPR) and the Committee on Budget, Finance and Administration (CBFA), which specialise in policy related to subjects allotted to them and advise the Trade Review Board (Avadhani, 2004).

The Uruguay round – A new change

The Uruguay round started in November 1982 in Geneva. It was the biggest negotiation mandate on trade ever agreed. In 1988, the round of talks in Montreal, Canada led to the elaboration of the mandate and a second round of negotiations. It took until December 1993 for every issue to be resolved. On April 1994, the ministers of 125 participating countries, including India, signed the deal. The GATT of 1947 continued to exist until the end of 1995, allowing time for all GATT member countries to accede to WTO and permitting an overlap of activity in areas like dispute settlement. As of today, 147 governments hold the WTO membership; India signed it on January 1, 1995.

The Agreement on Agriculture

The main aim of the WTO Agreement on Agriculture (AoA) was to encourage fair trade in agriculture by removing trade distortions resulting from differential levels of input subsidies, price and market support, export subsidy and other kinds of trade distorting support. The agreement envisaged a phased reduction in various kinds of support being given to agriculture by the member countries.

The WTO negotiators on AoA often refer to the three trade pillars within the AoA. It is on these three pillars that the majority of AoA negotiations are focused. The AoA is a part of the GATT and contains altogether 20 articles. The AoA was designed to eliminate all restrictions on the free trade of agriculture products in the international market. It gives directions on three aspects relating to free trade: (i) domestic support, (ii) export subsidy and (iii) market access (Barker, 2007) and World Society for Protection of Animal (WSPA).

Domestic support

The first trade pillar of the WTO AoA is domestic support, which means providing subsidies to a country's own farmers. The domestic support is further classified into five categories: (i) Aggregate Measure of Support (AMS), which includes product specific and non-product specific support (Amber box), (ii) Green box support, (iii) Blue box support, (iv) De minimus support and (v) Special and Differential (S&D) treatment box. Out of these, the WTO agreement requires reduction only in AMS and export subsidies, whereas, support under all other heads is exempted. The Doha Ministerial Declaration calls for 'substantial reductions in trade-distorting domestic support' (Chand and Philip, 2001).

(i) Amber box

Amber box includes two types of aids: (i) aids given to agriculture inputs and (ii) aids given to agriculture products. These two categories together form the AMS. The AMS includes the sum total of subsidies on inputs, such as seeds, fertiliser, water, credit, power, market price support, etc., measured by calculating the difference between domestic administered market price and external reference price (world price) multiplied by the quantity of production eligible to get applied administered price.

Items that fall into this box are the subsidies that are regarded as trade distorting, such as price support for producers. The WTO members are committed under the AoA to making substantial reductions to their Amber box subsidies. The developed nations are required to bring down their AMS by 20 per cent and developing nations by 13 per cent. The developed nations can give up to 5 per cent of their agriculture gross domestic product (GDP) as domestic support (de minimus) and developing nations up to 10 per cent. The above reduction is to be made only if it is above the limit based on agricultural GDP (Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India, 2006).

(ii) Green box

Items that fall under this box have minimal trade-distorting effects. The Green box subsidies are not subject to the usual AoA rules requiring subsidies to be reduced. The list of measures of the Green box includes general services, including research; pest and disease control; training, extension, inspection, marketing and promotion services; infrastructural services; food security stocks; domestic food aid; and direct payments to producers, including decoupled income support, income insurance and safety-net programmes; disaster relief, producer or resource retirement schemes; investment aids; environmental programmes; and regional assistance programmes. This enables countries to help their farmers to cope with future contingencies and probably to reduce the extra cost of production and serve the social welfare those subsidies being subject to reduction commitments under the AoA (Hag Elamin).

The highest Green box support to agriculture is provided by the USA, which spends more than one-third of its agricultural GDP on this support. Japan uses one-fourth of its agricultural GDP towards the Green box provisions. The Green box support in Canada and European countries is around 13 per cent of GDP. Among the developing countries, Brazil provides about 3 per cent of GDP for Green box subsidy while in Thailand this support is around 7 per cent. An estimate of the Green box expenditure for India is available only for the year 1995. In this year, the country used 2.34 per cent of agricultural GDP for Green box subsidy, most of which was on public stock (foodgrain) holdings (Jales, 2006).

(iii) Blue box

Items that fall into this box are direct payments made under production-limiting programmes. It is applicable only to the developed nations, which give such aids. These aids are viewed as less trade distorting than Amber box subsidies.

(iv) De minimus support

De minimis support is the minimal level of trade-distorting domestic support allowed by the WTO for protecting the domestic product of importance. There is a general willingness to look at de minimus levels for developing countries and possibly transition economies (most of these countries are bound by de minimis levels rather than AMS reduction commitments). Currently, developed countries are allowed a minimal amount of de minimis support; this is defined as 5 per cent of the value of total agricultural production for specific commodity and developing countries are allowed up to 10 per cent of these.

(v) Special and Differential treatment

Because of the economic difficulties faced by developing countries, they ought to be granted greater flexibility than developed countries in implementing GATT disciplines. S&D treatment provides formal recognition of the disadvantages developing countries face in the world trading system. The provision allows exports from developing countries to receive preferential access to developed markets without having to accord the same treatment in their domestic markets. The original purpose of S&D treatment was to level the playing field and give developing countries more time to adapt to international competition.

Export subsidy

The second pillar of trade is export subsidy, which refers to the money a country gives to its producers to encourage more export. Export subsidies lead to exports being at low prices, sometimes even below the cost of production. The export subsidies constitute only a small portion of the total subsidy support. The large share is accounted for by domestic support for the Organisation for Economic Cooperation and Development (OECD, about US $400 billion, of which nearly 75 per cent goes to the producers). The Doha ministerial declaration calls for reduction of all forms of export subsidies, with a view to phasing them out. Accordingly, the developed nations must reduce export subsidy by 36 per cent of the total value of export and by 21 per cent of the total quantity of export. For developing nations the total value of export is 25 per cent and 14 per cent, respectively.

At the Hong Kong ministerial conference, the modalities of the Doha declaration was accepted and, accordingly, the developed countries have agreed to eliminate export subsidies by 2013. However, a substantial portion of these will be withdrawn only towards the end of the transition (Odessey, 2005).

Though we expected to compete freely in the world market, a number of complex regulations have barred the products of the developing nations leading to the collapse of the agriculture sector of these nations. If this has to be improved we have to press for changing such regulations.

Market access

The third trade pillar of the WTO is market access, which refers to tariffs levied on the product to be imported. Under the AoA, the member countries are required to make substantial reductions in tariff levels. The general aim of the WTO is to reduce tariff at substantial level and this received much attention during the current negotiations, but there is an ongoing debate on how this should be accomplished. Two approaches have been suggested :

1. Cut all tariffs to a harmonised level. This means all tariffs on all products in a country are brought to the same level.

2. Cut on overall tariffs per country, but the country should have the flexibility to set different tariff levels for different products.

Under these directions, the aim is to adopt a common standard for tariffs and import duties, eliminating all existing regulations that are different for every nation. Non-tariff barriers are replaced by tariffs that provide substantially the same level of protection. The tariffs process, as well as other tariffs on agricultural products, are to be reduced by an average 36 per cent in the case of developed countries and 24 per cent in the case of developing countries, with minimum reductions for each tariff line. Reductions are to be undertaken over a period of six years in the case of developed countries and over a period of ten years in the case of developing countries. Accordingly, India made its 1428 tariff line free for access in April 2005. The least developed countries are not required to reduce their tariffs (Chand, 2002).

In the Doha and Hong Kong ministerial conferences it was resolved that the developing country members will have the flexibility to self-designate an appropriate number of tariff lines as special products that were guided by indicators based on the criteria of food security, livelihood security and rural development. It was agreed that the developing country members will also have the right to have recourse to a special safeguard mechanism based on import quantity and price triggers, with precise arrangements to be further defined. The special products and the special safeguard mechanism shall be an integral part of the modalities. This outcome of negotiations was a matter of great concern from the point of view of the developing nations.

Reforming global agricultural trade is widely recognised as an important step towards expanding economic development and is expected to lift millions out of poverty. The World Bank estimates that elimination of global trade barriers would enhance global economic welfare by US$290 billion per year by 2015. Thus, by formulating the best policy framework of market access that protects the farmers of the developing nations we can think of the betterment of millions of people around the globe.

Issues arising out of domestic support, export subsidy and market access

The AoA calls for countries to significantly reduce providing subsidies to its farm producers; however, many domestic support systems, such as direct payments/subsidies to farmers, are still allowed under the agreement. In fact, since the time the WTO was established, the developed nations have increased their farm subsidies by transforming their AMS support to the Green box support (according to data from the Organization for Economic Cooperation and Development (OECD). These direct payments and subsidies in the developed nations mean that the industrial countries are dumping food exports into the developing countries at alarming rates. Developing countries cannot afford to pay direct subsidies to their farmers and, therefore, argue that they are at a tremendous disadvantage in the open market due to the export dumping of commodities from industrial nations. Thus, the permissible level of domestic support is essential for the developing nations because their expenditure for AMS is very meagre as compared to the developed nations. In the case of India, AMS is nil; it provides only Green box support and that to only 2-3 per cent of total agricultural GDP.

Export dumping is the practice of selling products at prices below the cost of production. The USA is one of the prime offenders in export dumping of food. The levels of dumping by the USA are approximately 40 per cent for wheat, 25 to 30 per cent for corn, and nearly 30 per cent for soyabeans. As a result, millions of farmers and families in developing countries are the losers as artificially cheap food is coming from industrial countries. The cycle is repeated in country after country; artificially cheap food is dumped into a country putting domestic farmers and farm communities out of business. People are then forced to leave their land and migrate to already overcrowded cities hoping to find a low-wage factory job; rural communities and cultures are decimated; and massive hunger increases as people who used to grow and consume local food must now have cash to pay for food from distant lands.

In case of market access, under the WTO, a member nation has to reduce or eliminate border control mechanisms on imports (in WTO terms – Elimination of Quantitative Restrictions and Other Non-Tariff Barriers). The AoA requires that import control mechanisms, such as quantitative restrictions or quotas, must be eliminated. Historically, these restrictions or quotas allowed a nation to control the amount of certain food commodities to be allowed across its border. This was a way of ensuring that the domestic farmers were protected from imports of food already produced in the country, and ensured that the local food supply was maintained rather than building a reliance on a cash-based food supply thousands of miles away.

The second issue relating market access is the setting up of a minimum level for imports of agricultural products by member countries as a share of domestic consumption. Countries are required to maintain the current levels (1986-88) of access for each individual product. Where the current level of import is negligible, the minimum access should not be less than 3 per cent of the domestic consumption during the base period and tariff quotas are to be established when imports constitute less than 3 per cent of domestic consumption. This minimum level was expected to rise to 5 per cent by the year 2000 in the case of developed countries and by 2004 in the case of developing countries. However, special safeguard provisions allow for the application of additional duties when shipments are made at prices below certain reference levels or when there is a sudden import surge (International Forum on Globalisation, 2007).

Conclusion

We can minimise the adverse effect of the AoA on a developing economy by reducing the quantitative restrictions at substantial level and permitting the minimum access requirements through the proper tariff rate quota for the developing nations, as resolved in the Hong Kong ministerial conference. Further, there is a growing debate among the developing nations in the WTO about how to approach the issue of market access. All developing nations agree that until the AoA rules seriously address and eliminate export dumping, unlimited market access would provide developing nations little, if any, benefit and would in fact further harm these countries. Therefore, there is a call for a moratorium on further market access until the export dumping issue is realistically addressed. In the Hong Kong ministerial conference, some developing countries, including India and Brazil, have requested the use of temporary safeguard measures, such as implementing quantitative restrictions when there are import surges or price drops that could devastate food supplies or domestic farm communities.

References

- Ashwathappa, K. (2006). *International Business*. pp. 477-482. New Delhi: Tata McGraw- Hill.
- Avadhani, V.A. (2004). *Global Business*. pp.107-108. New Delhi: Himalaya Publication.
- Barker, D. WTO Agreement on Agriculture: Threat to Food Security and Sustainability, International Forum on Globalisation. Retrieved April 13, 2006 from www.ifg.org
- Chand, R. (25-29 November 2002). *Market Access: Negotiating modalities and likely consequences for Asian Countries*. Paper presented at Asia Regional Workshop on Multilateral Trade Negotiations on Agriculture, Organised by Food and

Agriculture Organisation, Regional Office for Asia and the Pacific, Bangkok, Thailand.

- Chand, R. & Philip, M.L. (2001). Policy Brief 14, Subsidies & Support in World Agriculture: Is WTO providing level playing field, National Centre for Agricultural Economics & Policy Research, New Delhi. Retrieved April 12, 2006 from http/wwww.ncap.res.in/upload_files/policy_brief

- Department of Agriculture & Cooperation, Ministry of Agriculture Government of India, Agreement on Agriculture, WTO framework agreement on Agriculture– framework for establishing modalities in agriculture. Retrieved April 12, 2006 from http://agricoop.nic.in/wtodac1.html

- Hag N. E., A Resource Manual, Domestic Support Measures, Commodities and Trade Division, FAO Corporate Document Repository, Multilateral Trade Negotiation on Agriculture. Retrieved from http://www.fao.org/docrep/003/x7353e/X7353e00.HTM.

- International forum on globalisation, WTO Food and Agriculture rules: Briefing on critical issues. Retrieved April 12, 2006 from www.centerforfoodsafety.org

- Odessey, B. (2005, December). 2013 Deadline set for eliminating agricultural export subsidies. Washington file staff writer, International information programme the United State Department of State. Retrieved April 12, 2006 from www.usinfo.state.gov

- Paul, J. (2005). *International Business*. pp.13-15. New Delhi: Prentice Hall of India.

- World Society for Animal Protection, Understanding the WTO: The three trade pillars of the WTO AoA and non-trade concern. Retrieved from www.wspa-international.org pp. 2-5.

Credit Risk Management in Indian Banks: A Comparative Study

Abstract: *Globalisation of the Indian economy has resulted in an increase in the number, nature and dimensions of the risk factors. The risk factors have increased not only because of fast development of newer products/ services and speed of their operations, but also due to their cross-border transactions, poor loan recovery and slow and expensive legal process. Credit risk, earlier present in the banking system, has also increased four-fold and credit risk management has emerged as a big challenge for the Indian banking system. This study focuses on the comparative evaluation of the quality of credit risk management system employed by public and private sector banks. Further, to evaluate the credit risk management systems of public and public sector banks, the Net NPA to Net Advances ratio (NNNAR), Gross NPA to Gross Advances ratio (GNGAR) and Credit Deposit ratio (CDR) have been analysed. This paper also offers some meaningful suggestions to improve the credit risk management system by banks.*

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Introduction

THE Banking industry is operating in a liberalised and global environment, which is highly competitive and uncertain. Banks are offering innovative products and initiating steps to computerise their offices to improve the speed of their operations and provide prompt services to their customers who are becoming highly demanding. The foreign exchange business and cross-border activities are increasing at a fast pace. The above developments have caused various types of banking risks, which can be broadly related to market environment and their business control functions. These risks may include credit risk, interest rate risk, liquidity risk, foreign exchange risk, group risk, technology risks, etc.

The Bank for International Settlements at Basel, Switzerland had issued draft guidelines on credit risk management during 1999 and the Reserve Bank of India (RBI) also came out with its first set of guidelines on risk management during 1999. In these guidelines, it has been suggested that the banks should put in place proper credit risk management systems. Some banks initiated the process of formulating credit risk policies in the year 2000 and have implemented these policies while few are still in the process of developing such policies. It has been emphasised in credit risk management guidelines that while the credit risk strategy of a bank should give recognition to the goals of credit quality, earnings and growth, it is also essential that the lender must determine the acceptable risk/reward trade-off for its activities, factoring in the cost of capital.

The Bank for International Settlements, Basel, Switzerland says that 'Granting credit involves accepting risk as well as producing profits'. The credit operations in banks, by nature, involve an element of credit risk. But if such risks are within predetermined ceilings, properly assessed and calculated ones, the loan loss to the bank can be restricted.

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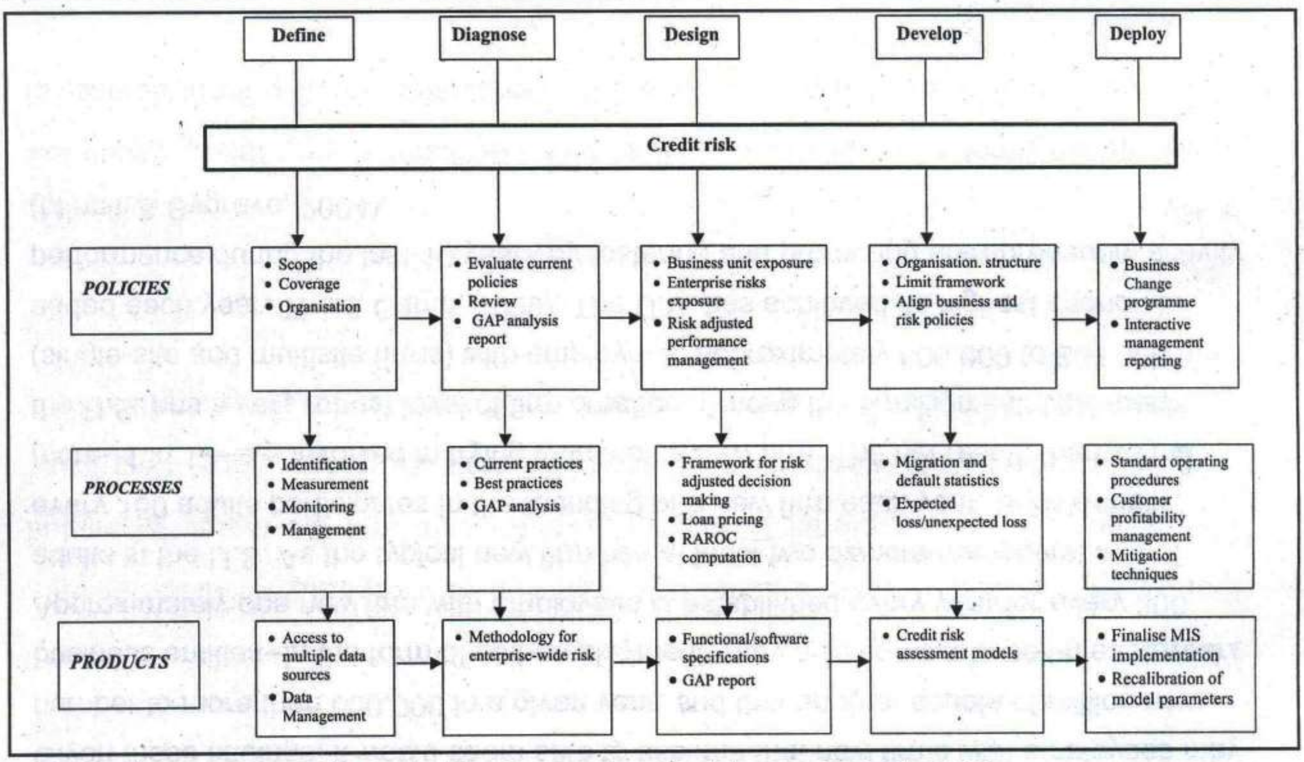

Figure 1. The proposed credit risk management model

Literature review

For effective implementation of credit risk scoring/ rating and management systems, the data has to be quite comprehensive, and well-tested for its integrity and reliability (Bidani *et al.*, 2004).

CRISIL (2003) undertook a detailed study on 'A roadmap for implementing an integrated risk management system by Indian banks by March 2005'. The objective of this exercise was to come up with a set of recommendations for the speedy and effective implementation of integrated risk management in the banking sector in India. They have suggested a model for integrated risk management system for Indian banks.

Bardia (2004) compared the proportion of net NPAs as a percentage of net advances and credits to deposits. He proposed some suggestions to improve the financial soundness and the profitability of the banks.

Linda and Anthony (2003) surveyed both the academic and the proprietary models to examine how the macroeconomic and systematic risk effects are incorporated into the measures of credit risk exposure.

Lowe (2002) examined the two-way linkages between credit risk measurement and the macro-economy. He suggested that a system of risk-based capital requirements is likely to deliver large changes in minimum requirements over the business cycle, particularly if risk measurement is based on market prices.

Objectives of the study

The objectives of this study are:

1. to compare public and private sector banks with respect to their credit efficiency;
2. to appraise the credit risk management system employed by public sector and private sector banks;
3. to examine credit deposit ratio, Gross Non Performing Assets (NPA) to Gross Advances ratio and Net NPA to Net advances ratio in measuring credit efficiency;
4. to evaluate the credit efficiency with regard to bringing down volume of NPAs and to bring up the quantum of deposits;
5. to calculate the projected Credit Deposit ratio, Gross NPA to Gross Advances ratio and Net NPA to Net Advances ratio after five years; and
6. to offer suggestions to improve the profitability and financial soundness.

Research methodology

The study has been conducted in two steps, i.e., analysis of primary data and analysis of secondary data.

Analysis of primary data: A questionnaire consisting of 13 questions has been prepared. It has been administered to the employees of public sector banks and private sector banks.

Sample: The technique employed is the simple random sampling. The respondents are from Indore (MP) and 35 respondents each from public sector banks and private sector banks have been chosen (N=35).

Tools for analysis: Z-test, factor analysis

Hypothesis for Z-test:

H_0 = Private sector banks have similar credit risk management system as in public sector banks.

H_1 = Private sector banks are better in terms of credit risk management system as compared to public sector banks.

Analysis of secondary data: Ratio analysis has been carried out to evaluate the NPA management of public sector and private sector banks.

Tools for analysis: T-test, Regression technique

Hypotheses for T-test:

a. H_0: The NNNAR of the public sector banks is similar to the private sector banks.
H_1: The NNNAR of the public sector banks is greater than the private sector banks.

b. H_0: The GNGAR of the public sector banks is similar to the private sector banks.
H_1: The GNGAR of the public sector banks is greater than the private sector banks.

c. H_0: The CDR of the public sector banks is similar to the private sector banks.
H_1: The CDR of the private sector banks is greater than the public sector banks.

Results

Table 1. Value of Z-Test

S.No.	Comparison of Banking Sector	Mean	Standard-deviation	Z-calculated value
1	Public bank	M1=48.20	7.43	4.55
2	Private bank	M2=56.28		

Since the Z_{cal} = 4.55 which is more than the Z_{tab} (at 5 per cent level of significance) which implies that null hypothesis is rejected and alternative hypothesis is accepted. This means that the private sector bank has a better credit risk management system than public sector bank because private sector banks have better loan disbursement policies and procedures, internal credit risk rating model for lending and pricing decisions, use of risk adjusted return on capital (RAROC) concept, human assets and use of risk-based audit systems.

Factors of credit risk management for public sector banks

1. **Credit risk monitoring:** It is the prompt identification of the loan accounts, which have developed some weaknesses in their functioning for initiating timely corrective actions by items 1,3,5,8,11 and 7. These variables in the questionnaire are: 'Does your bank have credit risk management policies?'; 'Does your bank have separate credit risk management department than the credit department while other banks do not have?'; 'Does your bank have better internal credit rating model than any other bank?'; 'Does your bank use the credit rating model for lending as well as pricing decisions while other banks use this policy for only lending purpose?'; 'Does your bank use RAROC credit adjusted return on capital concept for pricing of loans while other banks do not use this concept?', 'Does your bank have tailored credit rating models for different kind of entities while other banks do not have them?'. Variable 01 is the strongest and explains 33.60 per cent variance and has a total factor load of 0.867.

2. **Credit appraisal:** It is appraising a project in order to improve a bank's loan portfolio and is measured by items 12, 4 and 2. These variables in the questionnaire are: 'Does your bank have more qualified/experienced finance as well as engineering employees than any other bank?'; 'Does your bank have better loan disbursement policies than any other bank?'; 'Has your bank started using credit risk management policies before any other bank?'. Variable 12 is the strongest and explains 0.93 per cent variance and has a total factor load of 0.872.

3. **Credit risk mitigation:** It involves credit risk environment, formulation of the strategy to be adopted at pre-sanction stage, level of credit approving authority, monitoring and reviewing the risk profile and dealing with problem credit and risk pricing and is measured by items 6 and 9. These variables in the questionnaire are: 'Can your bank track the probabilities of default better than any other bank?'; 'Does your bank incorporate contingent liabilities in the risk management process while other banks do not incorporate?'. Variable 6 is the strongest and explains 6.237 per cent variance and has a total factor load of 0.889.

4. **Credit review:** This refers to verification in regard to continued viability of the borrower's activity and assessment regarding the need-based character of credit limits and it is measured by item 10. This variable in the questionnaire is: 'Does your bank have a comparatively shorter loan account review cycle than any other bank?'. It explains 1.476 per cent variance and has total factor load of 0.682.

5. **Risk based audit system:** It evaluates the adequacy and effectiveness of risk management policies and procedures' internal control system. It

is measured by item 13. This variable in the questionnaire is: 'Does your bank use risk-based audit system while other banks do not use this system?'. Variable 13 explains 0.0805 per cent variance and has a total factor load of 0.857.

Factors of credit risk management for private sector banks

1. **Credit rating models:** It refers to models which define, measure and evaluate various credit risk categories of different types of borrowers and is measured by items 8,7,5,1,3 and 11. These variables in the questionnaire are: 'Does your bank use a credit rating model for lending as well as pricing decisions while other banks use this policy for only lending purpose?'; 'Does your bank have tailored credit rating model for different kinds of entities while other banks do not have?'; 'Does your bank have better internal credit rating model than any other bank?'; 'Does your bank have credit risk management policies?'; 'Does your bank have a separate credit risk management department than the credit department while other banks do not have?'; 'Does your bank use RAROC credit adjusted return on capital concept for pricing of loans while other banks do not use this concept?'. Variable 8 is the strongest and explains 3.124 per cent variance and has a total factor load of 0.832.

2. **Credit mitigation tools:** It involves credit risk environment, formulation of the strategy to be adopted at pre-sanction stage, level of credit approving authority, monitoring and reviewing the risk profile and dealing with problem credit and risk pricing and is measured by items 6 and 9. These variables in the questionnaire are: 'Can your bank track the probabilities of default better than any other bank?'; 'Does your bank incorporate contingent liabilities in the risk management process while other banks do not incorporate?'. Variable 6 is the strongest and explains 6.237 per cent variance and has a total factor load of 0.889.

3. **Credit risk assessment:** It refers to quantifying and measuring the degree of credit risk which a particular transaction or an activity is exposed to. It is measured by items 4 and 12. These variables in the questionnaire are: 'Does your bank have better loan disbursement policies than any other bank?'; 'Does your bank have more qualified/experienced finance as well as engineering employees than any other bank?'. Variable 12 is the strongest and explains 0.930 per cent variance and has a total factor load of 0.672.

4. **Credit risk identification:** It refers to the understanding of the nature of credit risks, the circumstances which lead a situation to become a credit risk situation and causes due to which credit risk can arise. It is measured by item 2. This variable in the questionnaire is: 'Has your bank started using credit risk management policies before any other bank?'. Variable 2 is the strongest and explains 15.56 per cent variance and has a total factor load of 0.674.

5. **Risk-based audit system:** It evaluates the adequacy and effectiveness of risk management policies and procedures of the internal control system. It is measured by item 13. This variable in the questionnaire is: 'Does your bank use risk-based audit system while other banks do not use this system?'. Variable 13 explains 0.0805 per cent variance and has a total factor load of 0.673.

Net NPA as percentage of Net Advances (NNNAR)

This ratio relates to NPA after profit provisioning to advances. It is an important parameter of examining the credit efficiency of a bank. It also indicates how good banks are at provisioning practices. The Table 2 shows the net NPA as a percentage of net advances in public and private sector banks together with some statistical measures. The projected NNNAR for the year 2010-11 is also calculated through regression technique.

Table 2. The net NPA to net advances ratio (NNNAR)

Year	Public (%)	Private(%)
1999-00	7.42	5.41
2000-01	6.74	5.44
2001-02	5.82	5.73
2002-03	4.54	4.95
2003-04	3.00	2.84
2004-05	2.06	2.17
Mean	4.93	4.424
Standard deviation	1.932	1.39
Covariance (%)	39.19	31.42
2010-11	-3.35	-8.6

Gross NPA as percentages to Gross Advances Ratio (GNGAR)

This ratio reflects NPA to advances before profit provisioning. It measures the credit efficiency of a bank before effecting profit provisions. It reflects how good the banks' credit policies are. Table 3 shows the gross NPA as a percentage of gross advances in public and private sector banks together with some statistical measures. The projected GNGAR for the year 2010-11 is also calculated through regression technique.

Table 3. The gross NPA to gross advances ratio (GNGAR)

Year	Public(%)	Private(%)
1999-00	13.98	8.17
2000-01	12.37	8.37
2001-02	11.09	9.64
2002-03	09.36	8.08
2003-04	07.80	5.84
2004-05	05.53	4.44
Mean	10.022	7.424
Standard deviation	2.825	1.742
Covariance (%)	28.19	23.47
2010-11	-2.36	1.46

Credit Deposit Ratio (CDR)

The CDR relates to total advances granted by a bank to its total deposits on any particular date. This ratio focuses on the credit creating ability of a bank. Thus, it is an important parameter used to analyse the credit efficiency of a bank. This ratio also provides a strong basis for the efficient utilisation of deposits mobilised by a bank. A high credit deposit ratio reflects efficient credit creating capabilities.

Table 4 shows the CDR in public sector and private sector banks together with some statistical measures.The projected CDR for the year 2010-11 is also calculated through regression technique.

Table 4. Credit deposit ratio (CDR)

Year	Public(%)	Private(%)
1999-00	47.756	49.038
2000-01	48.285	49.849
2001-02	49.567	69.616
2002-03	50.820	67.070
2003-04	51.488	63.519
2004-05	56.960	70.288
Mean	50.813	61.564
Standard deviation	3.043	8.844
Covariance(%)	5.99	14.37
2010-11	62.95	92.52

Data analysis and interpretation for 'T' test

Table 5. 'T' test for comparison of public sector and private sector banks

Particulars	NNNAR	GNGAR	CDR
H_0 (Null Hypothesis)	$m_{pub} = m_{pvt}$	$m_{pub} = m_{pvt}$	$m_{pub} = m_{pvt}$
H_1 (Alternative Hypothesis)	$m_{pub} > m_{pvt}$	$m_{pub} > m_{pvt}$	$m_{pub} < m_{pvt}$
Degrees of Freedom (n_1+n_2-2)	10	10	10
Type of Test	One tailed	One tailed	One tailed
Calculated Value of 'T'	0.53	1.92	2.82
Critical Value of 'T'	1.81	1.81	1.81
Conclusion, H_0 is	Accepted	Rejected	Rejected
Descriptive Conclusion	The mean NNNAR of public sector banks and private sector banks is equal.	The mean GNGAR of public sector banks is greater than private sector banks.	The mean CDR of private sector banks is greater than public sector banks.

1. **Statistical analysis of NNNAR:** It is evident from Table 5 that NNNAR of public sector banks and private sector banks do not differ significantly, hence they are equally efficient in this respect.

2. **Statistical analysis of GNGAR:** It is evident from Table 5 that GNGAR of public sector banks differ significantly from private sector banks, hence they are not equally efficient in this respect and alternative hypothesis holds good, i.e., public sector banks have greater GNGAR as compared to private sector banks.

3. **Statistical analysis of CDR:** It is evident from Table 5 that the CDR of public sector banks differ significantly from private sector banks, and alternative hypothesis stands true, i.e., private sector banks have greater CDR as compared to public sector banks.

Summary of findings and suggestions

1. Private sector banks are better in Terms of credit risk management system because they have separate credit risk management department, internal credit risk rating model, effective surveillance of loan disbursement process, shorter loan account review cycle, efficient tracking of default accounts, use of RAROC concept for pricing of loans, qualified and experience personnel and risk-based audit system.

2. It has been observed from Table 2 that the NNNAR of public sector banks has declined constantly for the last six years while the NNNAR of private sector banks showed an upward trend initially but later on declined. Hence, it reflects that both the sectors should adopt such practices in order to sustain the trend. The average NNNAR of public sector bank is more than the private sector banks, which reflects the better credit risk management policies adopted by private sector banks.

3. Table 3 shows that the GNGAR of public sector banks has shown a declining trend for the last six years while the GNGAR of private sector banks showed an upward trend initially but later on declined. The average GNGAR of public sector bank is more than the private sector banks, reflecting better credit risk management practices adapted by the private sector banks.

4. Table 4 shows that the CDR of public and private sector banks has shown an upward trend. The average CDR of public sector banks is less, reflecting an inefficient utilisation of funds generated from deposits for the purpose of credit creation.

5. An important and interesting fact has been observed in Table 5 that although there is a significant difference between the means of gross NPA and CDR of the banks, there is no significant difference between the means of net NPAs because of high volumes of advances and deposits and better profit proportioning in public sector banks.

6. By 2010-2011, assuming all factors being constant, net NPA and gross NPA will reduce while CDR will increase for both types of banks.

7. CDR of private sector banks will be more than the public sector banks and hence, the gross NPA will also be more in private sector banks.

Conclusion

The paper presents both the qualitative and quantitative aspects of credit risk management practices adopted by private and public sector banks. The findings of the paper suggests that credit operations in private sector banks are better as compared to public sector banks because of efficient credit risk management system adopted by them. It also reflects that in future, with the increase of credit deposit ratio in private sector banks, the NPA will increase in terms of value but will decline in terms of percentage to total CDR because of sound credit risk management policies adopted by private sector banks.

References

- Bardia, C.S. (2004). Credit efficiency in banks: A comparative study. *The ICFAI Journal of Industrial Economics,* I (3), 60-68.
- Bidani, S.N, Mitra, P.K. & Kumar, P. (2004). *Suggestions and recommendations for effective credit risk management.* (pp.169-170). Delhi: Taxmann Allied Services Pvt. Ltd.
- CRISIL (2003). A roadmap for implementing an integrated risk management system by Indian banks by March 2005- *IBA Bulletin Special Issue,* XXVI-No. 1, pp.37-55.
- Linda, A. & Anthony, S. (2003). A survey of cyclical effects in credit risk measurement models. Bank of International Settlements, Monetary and Economic Department, Working Papers p. 126.
- Lowe, P. (2002, September), Credit risk measurement and procyclicality. Bank of International Settlements, Monetary and Economic Department, Working Papers (No. 116).

A Study of the Motivational Climate and Role Efficacy in Indian Call Centres

Abstract: *The Indian call centre industry is growing at a fast rate and has the strong capability of generating jobs for millions of Indians. In the present call centres, specific efforts are undertaken to (i) ensure a healthy motivational climate through measures, such as grooming employees for skills, knowledge and attitude; enhancing work culture; offering attractive compensation packages; and (ii) provide a conducive environment of optimum role efficacy. However, in spite of these measures, the rate of attrition is high and is on the rise, which is detrimental to this job segment. Taking cognisance of this fact, this study has been undertaken to investigate the motivational climate and role efficacy of an Indian call centre to identify the probable causes that lead to attrition in the call centres. On the basis of the findings of this study, certain human resource strategies/organisational development interventions have been recommended for implementation to enhance the motivational climate and reduce the current high rate of attrition in the Indian call centres.*

Satish Seth*
M.S. Turan**

Introduction

THE call centre industry with other informtion technology enabled services (ITES) would be worth Rs. 81,000 crores with 20,00,000 job requirements by 2008. One of the main challenges being faced by the call centre industry is the high rate of attrition. The employee turnover rate is estimated to be as high as 25 per cent to 35 per cent. Most of the research and training efforts undertaken to date in the industry have focused on grooming employees for skills, knowledge and attitude; enhancement of the work culture and attractive compensation packages. Although specific measures in the above areas have helped to enhance the motivation level of employees and as a consequence improved their work performances, the problem of high attrition still remains unresolved.

In any organisation the performance of people working there basically depends on their own potential effectiveness, technical competence, managerial skills and experience and the design of the roles they perform. Hence, the most important variables at the organisational level are the motivational climate of the organisation and the role-interaction patterns. The psychological distance between various roles determine to a great extent how the roles interact and collaborate with each other. These influence and are in turn influenced by the organisational climate.

The present study involves the diagnosis of the motivational climate and role efficacy of an Indian call centre, M/s Callcen, based in Gurgaon, India through questionnaires administered to a select sample of employees. Based on the responses received, the motivational climate and role efficacy profiles were drawn and analysed.

Motivational climate

The culture prevailing in an organisation tends to encourage and promote certain types of behaviours more than others. The patterns of behaviours of the employees characterises the motivational climate of the organisation. The motivational climate may facilitate or inhibit employee development. The behaviour shown by people in an organisation or department in relation to various task dimensions indicates the expression of certain motives. One conceptual framework of climate emphasises motivational linkages (Litwin and Stringer, 1968). The framework outlines the motives on which the climate is measured, i.e., achievement, power, extension, affiliation, dependency and control.

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Likert (1967) proposed six dimensions of organisational climate, i.e., leadership, motivation, communication, decision, goals and control. Litwin and Stringer (1968) proposed certain dimensions of organisational climate, i.e., conformity, responsibility standards, rewards, organisational clarity, warmth and support and leadership.

Based on a review of past studies and discussions with managers, the following processes were suggested which characterise the motivational climate of the organisation. They are: orientation, interpersonal relationships, supervision, problem management, management of mistakes, conflict management, communication, decision-making, trust, management of awards, risk-taking and innovation and change (Pareek 1997). He concluded that the organisational climate is characterised by the combination of dominant and secondary motives.

Some of the climate profiles based on motives outlined in the framework of Litwin and Stringer (1968) are explained below:

a) An 'achievement-dominant' climate indicates that the concern for work excellence and competition with other companies prevails in the organisation. Excellence is rewarded, information is available for those who need it for deliberations and decision-making, people who achieve targets are trusted, people prefer to solve problems by themselves and learn from experience, take moderate risks and are concerned about achieving tasks.

b) An 'extension-dominant' climate indicates that there is high concern in the organisation to develop people and groups to work for the larger good, and people are treated as human beings with a genuine concern for their welfare rather than being treated as roles. In such a place, people help each other, supervisors help their subordinates to grow and develop, and people are encouraged to handle problems and resolve conflicts supportively.

c) An 'affiliation-dominant' climate is characterised by people striving for friendly, warm and affectionate relationships. In such places, tasks and methods of achieving the tasks are based on relationships, people have a high concern for social relationships and like being good and close to each other.

d) A 'dependency-dominant' climate indicates that in such an organisation people do not do things on their own but look for orders or suggestions from their superiors and refer matters to them rather than attempt solutions themselves. Such an organisation is characterised by observance of regulations, strict following of orders, excessive dependence on authority, a clear line of communication, etc.

e) An 'expert power-dominant' climate indicates that experts, and people with skill and expertise are encouraged. They are influential in decision-making, resolving conflicts and problems, and are regarded highly in the organisation.

f) A 'control-dominant' climate indicates that people enjoy status, power and authority for its own sake, where managers like to control their subordinates, communication is selective only with some people and is used as a mechanism of control, decisions are made by a few and only those powerful few dominate most of the decisions.

Role efficacy

In any organisation, the performance of people basically depends on their own potential effectiveness, technical competence, managerial skills and experience and the design of the roles they perform in the organisation (Pareek, 1997). In fact, it is the integration of individuals and their roles that ensures their effectiveness in the organisation. Thus, unless people have the requisite knowledge, technical competence, and skills required for their roles, they cannot be effective. However, if the role does not allow a person to use his or her competence and if the individual constantly feels frustrated in the role, the effectiveness is likely to be low. Hence, the very nature of role has built-in potential for conflict or stress. The closer the 'role-taking' i.e., responding to the expectation of various other people, moves to 'role-making' i.e., taking the initiative in designing the role creatively so that the expectation of other people and of the role occupant are integrated, the more the role is likely to be effective. This potential effectiveness may be called efficacy. In essence, role efficacy can be viewed as the psychological factor underlying role effectiveness.

Dimensions of role efficacy

Pareek (1997) explains role efficacy as a multi-dimensional concept. He concludes that the greater the dimensions to a particular role, the higher the efficacy of that role is likely to be. These dimensions can be classified into three groups. The first is 'role making' as opposed to role taking. The second is a set of role efficacy aspects and relates to power enhancement of the role. This can be called 'role centring' as opposed to role entering (where one would accept the role as given and reconcile to its prevailing level of importance or unimportance). Third is 'role linking' or extending the role to link with other roles and groups and can be viewed in contrast with role shrinking (limiting the role to narrow, work-related expectations). These three main dimensions have been further subdivided and explained below:

1. Role making

(i) Self role integration

Every professional represents a unique combination of strengths and experience along with a basket of technical training, special skills and contributions. Wherever role definition allows for the maximum use of the special skills and strengths of the incumbent, the more effective and productive is the role likely to be both for the employer as well as the employee. This is called self role integration. To cite a case in an organization, a person was promoted to a responsible position, which was seen as a reward and he was quite happy with the well deserved promotion. However, he soon discovered that in the new position he did not have the opportunity to use his special skills of training, counselling, and organizational diagnosis. In spite of the fact that he performed well in the new role, his efficacy was not as high as it had been in the previous role. Once the role was redesigned to enable him to use his skills, his efficacy grew manifold.

(ii) Proactivity

A person who occupies a role responds to various expectations that people in the organisation have about that role.

(iii) Creativity

It is not just individual initiative that is important for ensuring efficacy. An opportunity to be creative and to try new and unconventional ways of solving problems is equally important. If a person perceives that he has to perform only routine tasks, it can be detrimental to higher role efficacy. If he feels that the role does not allow any time or opportunity to be creative, efficacy is bound to be low.

(iv) Confrontation

In general, if people in an organisation avoid problems or shift them to others, their role efficacy will be low. The tendency to confront problems and find relevant solutions contributes to efficacy.

2. Role centring

(i) Centrality

If a person feels that the role he occupies is central to the organisation, his role efficacy is likely to be high. If people feel that their roles are peripheral and is not very important, their potential effectiveness will be low. This is true for all persons and not only for those at the lowest level.

(ii) Influence

The more influence a person is able to exercise in his role, the higher his efficacy is likely to be. An important factor underlying higher motivation of the workers is the space allowed for the use of discretion in decision-making. Roles have been found to be more efficacious when workers are allowed to use discretion.

(iii) Personal growth

Another factor which contributes to role efficacy is the perception that the role provides the individual an opportunity to grow and develop. There are several instances of people leaving one role and becoming much more effective in another primarily because they have greater opportunity to grow in the second role. In many institutions of higher learning, the roles of the research/teaching staff pose problems of low efficacy. An important factor driving efficacy down in such cases is the lack of systematic growth opportunities within existing structures. Institutes that are able to plan such growth succeed in increasing role efficacy and, in turn, obtaining greater contribution from them.

3. Role linking

(i) Inter-role linkage

Linking one's role with those of others in the organisation increases efficacy. If there is a joint effort to understand problems and find solutions, overall efficacy across roles involved is likely to be high. Of course, the assumption is that people know how to work cohesively and effectively. Similarly, if a person is member of a task group set up for a specific purpose, his efficacy will be reduced if he tries to work without any linkages with other team members or stakeholders.

(ii) Helping relationship

If a person feels that he can get help from some source in the organisation whenever the need arises, he is likely to have higher role efficacy. On the other hand, if there is a feeling that no help is forthcoming when sought, or that the respondents are hostile, role efficacy will be low.

(iii) Superordination

A role may have linkages with systems, groups and entities beyond the organisation. When a person performing a particular role feels that what he does is likely to be of value to a larger group, his efficacy is likely be high. In roles that offer opportunities for the setting and fulfilling of superordinate goals, efficacy is enhanced. Similarly, roles in which the people feel that what they are doing is helpful to the organisation in which they work ensure higher efficacy.

Role and work motivation

Role efficacy contributes to work motivation; role efficacy is the potential effectiveness of a person in the role. Pareek *et al.* (2003), cite several factors which contribute to role efficacy, for example the individual's feeling of his role being central in the organisation, self-role integration, possibilities for the individual to use initiative and be creative, linkage of the role with other roles in the organisation, helping relationships in the organisation, opportunity to influence and to work on larger goal benefits to others, opportunity of growth, etc. In fact, it may be useful to measure role efficacy of several roles in the organisation and take steps to raise it.

Work motivation is partly in proportion to the challenge the job provides to the individual. Some of the factors suggested by Herzberg (1967) as motivators are very important for work motivation. Challenge in the job is one such factor. If a job does not provide enough challenge to the individual, his motivation will be low. If a feeling of lack of challenge seems to be prevailing, it may be useful to reverse the job content and do something to build more challenge in the job. This may be achieved by delegation of more responsibility or expanding the scope of the job. Herzberg concludes that the opportunities to influence decisions increase work motivation. Every individual should feel in his job that he is able to influence some decisions. This is possible when there is some autonomy and freedom to the individual who is also able to receive it. Enough autonomy with adequate support and a demand for responsibility combine to increase motivation. Each job may be examined to see how such autonomy and responsibility can be increased. Work motivation is directly related to the perception of opportunities of development and growth in the job. If people feel that what they do in the job helps them to learn new things and contributes to their development, the motivation will be high. Each job should be analysed from this point of view. When an individual reaches a stage where he may feel that he is only repeating himself, the possibilities of job rotation to help him learn a new job may be explored. This principle has some limitations as every job cannot provide learning opportunities for everyone at all times.

Pareek *et al.* (2003) emphasise that the perception that a person is contributing to a larger goal increases motivation. The importance of his job may be communicated to the employee and he may be helped to see how his job is useful for the section/department, for the organisation, for a larger section of the community, the profession and the society or for the nation. An employee's perception of the context of his job in terms of its contribution to a larger goal contributes to his work motivation.

McClelland and Winter (1962) concluded that an individual's motivational pattern can be changed. Experiments and experience have shown that it is possible to raise the level of specific needs in the individual. For example, if an individual has low achievement motivation, and if this concerns him, and he wants to raise his level of achievement, this can be done. It may be useful to provide opportunities to individuals to first get a picture of their motivational profile and then special programmes can be arranged to help them raise the level of a specific psychological need in which they may be interested.

According to McClelland and Burnham (1976) the performance directly contributes to work satisfation and is a direct result of effort and not vice-versa. In order to increase work motivation, stress should be given on increasing the effort of the employees for good performance. It is wrong to expect higher performance directly from general satisfaction. Unless rewards are related to efforts, the resulting satisfaction will not lead to high performance.

Pareek *et al.* (2003) conclude that an individual's work motivation and capability to achieve increases with the experience of success with gradually challenging tasks. If an individual is helped to experience success in achieving goals which gradually become more challenging, his motivation and capability for higher achievement increases. It may be useful to plan goals for an individual in a graduated series of challenges.

Call Centre Industry

Industry watchers have dubbed the current decade as the decade of ITES, and the call centre industry is perhaps the biggest component of ITES. A NASSCOM report predicted the industry's size to be a whopping 20,000 crore by 2007-08 (NASSCOM, 2005). It further estimated that during 2008, this segment will create employment for 2,70,000 people. The international call centre segment is growing at the rate of 50 per cent to 70 per cent. Prof. Michael Dertouzous of Massachusetts Institute of Technology (MIT) has predicted that India could earn as much as US$1 trillion in the next five to seven years through low-end information technology (IT) activities, particularly, outsourcing and call centres. In fact, Indian call centres are poised to register the highest growth rate in the Asia Pacific region during this phase. The Indian call centre industry currently employs 1,60,000 professionals. The total employment is expected to reach 6,00,000 by 2007. The nascent business, however, is witnessing high rates of attrition, making industry leaders sit up and take note. The current average rate of attrition is estimated between 30 per cent to 35 per cent.

The NASSCOM report has also cited reasons for the high attrition rate as ranging from monotony of repetitive tasks to late hours of work and an unrelenting demand for consistent performance. Other reasons include lack of career opportunities, especially when it comes to vertical growth, seeking better monetary benefits or a change. Most research and training efforts undertaken to date in the Indian call centre industry have focused on grooming employees for skills, knowledge and attitude, enhancement of work culture and attractive compensation packages. Whilst specific measures in these areas have helped to enhance motivation level of employees and, as a consequence, improve their work performances, the problem of high attrition remains unresolved.

Turnover

In many cases, turnover is a constant concern for customer service centres. Because of the nature of the call centre agents' job position, many supervisors consider turnover a necessary evil that needs to be dealt with on a continuing basis. Discussions with call centre managers reveal that turnover is considered severe when related to budget considerations, customer service levels, and employee morale/ productivity, etc. The loss of highly skilled employees is one such factor. The attrition of first-rate employees can be an irreplaceable loss for companies. In addition, constant turnover and recruiting can create a negative impression about the company. The call centre managers also state that turnover warrants extra focus if a clear pattern begins to appear. For example, if there has been 50 per cent turnover in the past year due to resignations, chances are that some fundamental problems exist within the company and need to be addressed. If employees are always leaving because of negative circumstances, this is a red flag that significant problems exist within the organisation and that management practices, training and human resource (HR) policies need to be revisited.

A high turnover is a major problem for many call centres and it challenges the management to identify the causes of attrition and to know why turnover is happening. It is important to know the exact reasons why agents leave in order to:

1. Identify the 'controllable' reasons and focus attention on reducing the causes of these departures;

2. Accurately plan ahead for recruiting, hiring and training replacements at the same pace as you expect agents to leave.

Some reasons for agent turnover are beyond the control of the management. These departures will occur regardless of how attractive the management makes it for agents to stay. The 'non-controllable' turnover includes:

- Retirements;
- Promotions;
- Transfers to other departments within the organisations; and
- Illness.

The 'controllable' turnover includes resignations due to:

- Job stress;
- Low pay;
- Lack of advancement possibilities; and
- Lack of support and reward on the job.

Background

The present study aims to diagnose the motivational climate and role efficacy of an Indian call centre, M/s. Callcen Ltd, located in Gurgaon, India. On the request of the management and for reasons of confidentiality, the name of the call centre has been changed. It is a small-sized call centre, set up with foreign collaboration in Gurgaon in 1995. At present it has about 350 graduate 'agents' sitting in cubicles clonking phones to address customer service queries that range from credit card enquires to trouble shooting software problems from customers all over the United States of America (USA). Because of the time difference between India and the USA these employees work from early in the evening, i.e., 1800 hours to early dawn, i.e., 0330 hours. They are exposed to the phenomenon of 'accent' stress. They also experience a host of health problems, such as digestion, hair loss, back pain and stress. Also of late it has been found that the necessary teamwork and collaboration were not forthcoming and delays, such as backlog of waiting calls, were occurring on a daily basis. The senior management adversely commented upon the functioning of the organisation. Several meetings were held with the staff to understand the problem of the rising levels of inertia. Various views were expressed on how the work should be done, the style of management, delegation, accountability, etc. However, the visible improvement in the overall climate and the operational efficiency, registered as work backlog, did not reduce appreciably.

Objectives of the study

The study has been carried out with the following objectives in mind:

1. To diagnose the motivational climate and role efficacy of call centre agents (CCAs) in the organisation i.e., M/s Callcen Ltd.

2. To suggest suitable HR strategies with a view to enhancing the motivational climate and reducing the current high attrition rate in the organisation.

Methodology

The following methodology was adopted to achieve the objectives:

1. General data on the call centre industry in India were obtained from primary and secondary sources through interviews, mailers, printed media and the Internet.

2. Administration of questionnaire on motivational climate, i.e., motivational analysis of organisation (climate) [MAO(C)] and the role efficacy scale.

3. Preparation and analysis of profiles on motivational climate and role efficacy.

4. Discussion of the results of the analysis with key organisational members through unstructured interviews and recommending of suitable strategies/ interventions for improving motivational climate in the organisation.

Sample size

The questionnaire was administered to 50 call centre agents. Of these, 39 responded, which constitutes almost 10 per cent of the population.

Instruments of the study

The MAO(C) (Pareek, 1997) measures the perceived motivational climate of an organisation. The purpose of this instrument is to arrive at the dominant motivational profile on six motives, i.e., achievement, affiliation, extension, dependency, control and power. Eleven dimensions have been identified for the purpose of measuring climate. The eleven dimensions on which the motivational climate is measured are: orientation, interpersonal relationship, supervision, communication, decision-making, trust, managing problems, managing mistakes, managing conflict, managing rewards and risk-taking. Each dimension has six statements, which have to be ranked in terms of importance as perceived by the respondents. These eleven variables are considered to be illustrative of organisational climate, if not exhaustive. This instrument not only measures the aggregate climate but also the climate for each of the variables.

The role efficacy scale, (Pareek, 1997), is a structured instrument consisting of 20 triads of statements which a respondent marks to describe his role most accurately. The three alternatives are pre-weighted. There are two statements for each dimension of role efficacy and the scoring pattern followed is +2, +1 or -1. The scale is useful in a number of different situations. It can be used for role clarification in team building, for coaching key managers, for problem identification within a work team and for training managers and supervisors about the concept of role efficacy. Role efficacy has ten dimensions and the more these are present in a role the higher the efficacy of the role is likely to be. The dimensions are: centrality, integration, proactivity, creativity, linkage, helping, superordination, growth, influence and confrontation.

Result

Table 1 gives mean rank values of the total group for each dimension of organisational climate for the six motivations. The lower the score, the more dominant is the motivational climate prevailing in the organisation. The results show that:

1. Control is the dominant motivation, which characterises the overall motivational climate.
2. Dependency, ranked second, also indicates strong dominance.
3. The difference between control (first rank) and dependency (second rank) is not significant.
4. The difference between control and each of the motivations of expert power (third rank), achievement (fourth rank), extension (fifth rank) and affiliation (sixth rank) is significant.

The analysis further indicates that the dimensions of 'interpersonal relationship' and 'managing problems' show strong dominance over the control motivation. In the case of dependency, the dominant dimensions are 'managing problems' and 'managing mistakes'.

In addition to the diagnosis of overall motivational climate of the organisation the available data was studied with a view to assess the type of climate prevailing at each age group of management. Tables 2, 3 and 4 show control to be the dominant motivation in the motivational climate at the middle and junior age-group levels followed by dependency, ranked second. At the senior age-group level, however, achievement appears as the dominant motivation followed by extension and expert power, ranked second and third, respectively.

Table 5 shows the correlation among the various dimensions of motivational climate and role efficacy; a higher score between two variables means that if one increases, the other also tends to increase or, conversely, if one is low the other also tends to be low. A negative correlation between the two would indicate that if one variable is low, the other tends to be high and vice-versa. Some of the values arrived at are statistically significant at 95 per cent level. The results are summarised below:

1. Control had negative correlation with achievement (-0.408), affiliation (-0.412), dependency (-0.121), expert power (-0.368) and extension (-0.433). Except for dependency, all the other values are statistically significant.

Table 1. The overall motivational climate in M/s Callcen Ltd

S.No.	Category	Achievement	Affiliation	Dependency	Extension	Control	Expert power
1	Orientation	3.46	5.48	1.84	4.61	1.79	3.94
2	Interpersonal relationship	3.17	5.30	2.33	4.92	1.33	3.89
3	Supervision	3.92	5.48	2.33	4.46	1.43	3.30
4	Communication	3.28	5.94	2.20	4.69	1.61	3.17
5	Decision-making	3.25	5.28	1.89	5.10	1.87	3.30
6	Trust	3.61	5.58	1.92	4.38	1.48	3.23
7	Managing problems	3.28	5.35	2.20	5.17	2.15	3.23
8	Managing mistakes	3.43	5.41	2.28	4.74	2.23	3.02
9	Managing conflict	4.10	5.38	2.17	4.43	1.35	3.17
10	Managing reward	3.71	5.12	2.10	4.92	1.76	3.28
11	Risk-taking	3.58	5.35	2.12	4.76	1.66	3.53
	Total	**38.79**	**59.67**	**23.29**	**52.15**	**18.66**	**37.10**
	Average	**3.52**	**5.42**	**2.11**	**4.74**	**1.69**	**3.37**
	Final ranks	**4**	**6**	**2**	**5**	**1**	**3**

Table 2. The motivational climate of the junior age group (21-30 years)

S. no	Category	Achievement	Affiliation	Dependency	Extension	Control	Expert power
1	Orientation	3.72	5.54	1.45	5.09	1.54	4.002
2	Interpersonal relationship	3.18	5.54	1.81	5.36	1.18	4.003
3	Supervision	4.00	5.72	1.90	4.90	1.00	3.364
4	Communication	3.63	5.81	1.81	5.18	1.45	3.30
5	Decision-making	3.54	5.27	1.54	5.54	1.45	3.366
6	Trust	4.18	4.90	2.18	4.63	1.18	3.307
7	Managing problems	3.27	5.54	1.81	5.54	1.36	3.188
8	Managing mistakes	3.90	5.81	1.90	5.18	1.36	2.819
9	Managing conflict	4.00	5.36	1.90	5.27	1.00	3.3610
10	Managing reward	3.60	5.27	1.72	5.27	1.45	3.5411
11	Risk-taking	3.90	5.36	1.54	5.54	1.54	3.45
	Total	**40.95**	**60.12**	**19.56**	**57.50**	**14.51**	**37.66**
	Average	**3.72**	**5.46**	**1.77**	**5.22**	**1.31**	**3.42**
	Final ranks	**4**	**6**	**2**	**5**	**1**	**3**

Table 3. The motivational climate of the middle age group (31-40 years)

S.no	Category	Achievement	Affiliation	Dependency	Extension	Control	Expert power
1	Orientation	3.66	5.45	1.41	4.91	1.58	4.04
2	Interpersonal relationship	3.33	5.29	1.95	5.37	1.04	3.95
3	Supervision	4.29	5.41	1.87	4.75	1.16	3.25
4	Communication	3.5	6.00	2.00	4.91	1.33	3.16
5	Decision-making	3.5	5.29	1.41	5.41	1.75	3.16
6	Trust	3.79	5.87	2.08	4.66	1.33	3.29
7	Managing problems	3.66	5.25	1.87	5.54	1.41	3.25
8	Managing mistakes	3.54	5.79	1.87	5.08	1.54	3.08
9	Managing conflict	4.62	5.37	1.75	4.5	1.2	3.04
10	Managing reward	4.12	5.08	1.62	5.33	1.54	3.20
11	Risk-taking	3.7	5.33	1.87	5.04	1.41	3.62
	Total	**41.71**	**60.13**	**19.5**	**55.5**	**15.29**	**36.84**
	Average	**3.79**	**5.46**	**1.77**	**5.04**	**1.39**	**3.34**
	Final ranks	**4**	**6**	**2**	**5**	**1**	**3**

Table 4. The motivational climate of the senior age group (41-50 years)

S. no	Category	Achievement	Affiliation	Dependency	Extension	Control	Expert power
1	Orientation	1.5	5.5	5.5	1.5	3.75	3.25
2	Interpersonal relationship	2.25	5.0	6.0	1.0	3.5	3.25
3	Supervision	1.25	5.25	5.25	1.5	4.0	3.5
4	Communication	1.0	6.0	4.5	2.0	3.75	3.75
5	Decision-making	1.0	5.25	5.75	2.0	3.75	4.0
6	Trust	1.0	5.75	5.25	2.0	3.25	3.5
7	Managing problems	1.0	5.75	5.25	2.25	3.75	3.25
8	Managing mistakes	1.5	5.25	5.75	1.5	3.75	3.25
9	Managing conflict	1.25	5.4	5.4	1.75	3.0	3.5
10	Managing reward	1.5	5.0	6.0	1.5	4.0	3.0
11	Risk-taking	2.0	5.5	5.25	1.25	3.5	3.25
	Total	**15.25**	**59.65**	**59.85**	**18.25**	**40**	**37.50**
	Average	**1.38**	**5.42**	**5.44**	**1.65**	**3.63**	**3.40**
	Final ranks	**1**	**5**	**6**	**2**	**4**	**3**

2. The following negative correlations were also observed, though values were not statistically significant:

i. Achievement with affiliation (-0.101) and dependency (-0.249).

ii. Affiliation with dependency (-0.182) and expert power (-0.194).

iii. Dependency with extension (-0.239) and expert power (-0.115).

3. Achievement had positive correlation with expert power (0.249) and affiliation is positively correlated with extension (0.24), though neither values were statistically significant.

4. There was low correlation (almost zero) between expert power and extension (0.08); Extension had also low correlation with achievement (0.61).

5. Role efficacy had negative correlation with control (-0.389), dependency (-0.368) and

Table 5. The correlation of motivational climate and role efficacy dimensions

S. no	Achievement	Affiliation	Dependency	Extension	Control	Expert power	Role efficacy
1	Achievement	– 0.101	– 0.249	+ 0.61	– 408*	+ 0.249	– 0.145
2	Affiliation		– 0.182	– 0.24	– 0.412*	– 0.194	+ 0.085
3	Dependency			– 0.239	– 0.121	– 0.115	– 0.368*
4	Extension				– 0.433*	+ 0.08	+ 0.116
5	Control					– 0.368*	– 0.389*
6	Expert power						+ 0.136*
7	Role efficacy						

* *Values are statistically significant at 95 % level of confidence.*

achievement (–0.145). Of the above, the first two correlation values, i.e., control and dependency, are statistically significant.

6. Role efficacy was positively correlated with affiliation (0.085), extension (0.116) and expert power (0.136), though neither of these values are statistically significant.

Table 6 shows the frequency of persons with 2, 1, –1 scores on role efficacy for each dimension in the senior, middle and junior age groups. The dimensions of 'proactivity', ranked first, is dominant. This means that about 75 per cent CCAs in the organisation like to initiate some activity. A high proactivity leads to an increase in the role efficacy. Confrontation or the ability to solve problems and not shift them to others to tackle carries the next highest rank. Creativity, superordination, helping relationship and growth come next in rank. The dimensions of centrality, integration, influence and inter-role linkage rank low and need to be strengthened in order to increase overall role efficacy of CCAs in the organisation, especially in the junior and middle age groups.

Table 7 shows the frequency distribution of role efficacy index in the senior, middle and junior age groups. It may be seen that about 70 per cent of the CCAs in the organisation have a role efficacy index ranging between 61 per cent to 70 per cent. At individual age group levels the figures are 50 per cent, 64 per cent and 68 per cent in the senior, middle and junior age groups, respectively. As depicted in Table 6, the dimensions of centrality, influence and inter-role linkage need to be strengthened to increase the role efficacy of CCAs in the organisation. The higher the score for each dimension, the higher will be the role efficacy in each age-group and the organisation as a whole.

Conclusion

The results obtained on analysis of data were thereafter discussed with some key organisational members in the senior, middle and junior age groups. Their responses were analysed and the broad conclusions identifying the problems as faced by the organisation are as follows:

Table 6. Frequency of persons with 2, 1 and –1 scores on role efficacy at three levels of management

		Senior age group (41 – 50 years)				Middle age group (31 – 40 years)				Junior age group (21 – 30 years)				Total group			
S.N.	Dimensions	2 no.	1 no.	–1 no.	Total no.	2 no.	1 no.	–1 no.	Total no.	2 no.	1 no.	–1 no.	Total no.	2 no.	1 no.	–1 no.	Total no.
1	Centrality	3	1	–	4	3	3	5	11	4	13	7	24	10	17	12	39
2	Integration	2	2	–	4	4	2	5	11	6	14	4	24	12	18	9	39
3	Proactivity	2	1	1	4	8	2	1	11	19	2	3	24	29	5	5	39
4	Creativity	3	1	–	4	5	6	–	11	7	14	3	24	20	3	11	39
5	Inter-role linkage	2	1	1	4	5	2	4	11	1	18	7	24	8	21	10	39
6	Helping relationship	2	2	–	4	5	2	4	11	8	11	5	24	20	11	8	39
7	Superordination	2	2	–	4	8	2	1	11	10	7	7	24	20	11	8	39
8	Influence	3	1	–	4	3	3	5	11	4	14	6	24	10	18	11	39
9	Personal growth	2	2	–	4	6	2	3	11	12	7	5	24	20	11	8	39
10	Confrontation	2	2	–	4	9	1	1	11	14	5	5	24	25	8	6	39

Table 7. Frequency distribution of role efficacy index

Role efficacy index	Senior age group (41 – 50 years)	Middle age groupJunior (31 – 40 years)	age group (21 – 30 years)	Total group
Up to 50	–	1	2	3
51 – 60	1	3	9	13
61 – 70	1	4	9	14
71 – 80	–	2	4	6
81 – 90	2	1	–	3
Total	**4**	**11**	**24**	**39**

1. There is excessive control being exercised in most age groups. Rules and regulations are strictly enforced and work monitoring is close.

2. 'Dependency' has gradually set in because of excess control so much so that most matters, however trivial, get referred to senior management for decision-making or advice.

3. There is a need to focus on improving such dimensions of motivational climate as managing problems, managing mistakes and inter-personal relationships in the above context. An improvement in the overall motivational climate by reducing control and encouraging democratic and participative functioning is necessary.

4. Improvement in the motivational climate will contribute to enhancement of role efficacy, which can be further increased by strengthening the associated motivations of achievement, affiliation, extension and expert power.

5. Increased role efficacy is also to be achieved through increasing dimensions of self-role integration, centrality, influence and inter-role linkage.

Suggestions

In order to enhance the motivational climate and reduce turnover, the following factors that impact turnover were discussed with senior management. There is a critical need to consider the implementation of some of the measures, suggested below, in the organisation.

Recruitment, screening and orientation programmes

Recruiting techniques that simply bring in 'warm bodies' can raise turnover, while targeted recruiting will result in higher retention levels. Screening processes should identify people that are a good match for the job requirements and fully inform applicants about the reality of CCA job tasks. Finally, company orientation that provide CCAs with a positive introduction to the company and an understanding of company values establish a good relationship with employees.

Training and support of new graduates

Poor training programmes can raise turnover when agents do not have the tools to do their job well and have the perception that the company places little value on CCA tasks.

Quality of direct supervision

Good supervision ensures that CCAs have the information to improve their skills, as well as support with challenging job tasks. The degree to which CCAs are treated fairly within the customer service centre ties in with job satisfaction. If management is biased, uncommunicative or hostile to CCAs, the turnover will increase.

Competitive pay scale

Wages should be competitive with other job opportunities in the area or CCAs will be lost to better-paying jobs.

Other employment opportunities in the area

Other job opportunities with better advancement opportunities, challenges and skill development can be introduced.

Level of job satisfaction and rewards

CCAs regularly deal with a stressful job. Burnout levels are high and can be aggravated if there are few instances of job recognition and reward for excellent performance. Agents can also be disatisfied with their job when they do not have the tools and work processes to do a good job for their customers.

Attractive advancement opportunities within the company

Providing CCAs with career-pathing can often motivate them to stay with a company.

Unplanned change

Poorly-managed change can lead to attrition. If new systems, products, services or marketing are done with no advance notice or if CCAs are left uninformed about changes, turnover will increase.

References

- Herzberg, E. (1967). One more time: How do you motivate employees? *Harvard Business Review*, 46, 53 – 62.
- Likert, R. (1967). *New ways of Managing Conflicts*. p. 83-89. New York: Mcgraw Hill.
- Litwin, G.H. & Stringer, R.A. (1968). Motivational organizational climate, *Harvard University Press*, Cambridge, 15, 16-21.
- McClelland, D.C., & Burnham, D.H. (1976). Power is the great motivator. *Harvard Business Review*, 54 (2), 100-10.
- McClelland, D.C. & Winter, D.C. (1962). *Motivating Economic Achievement*. New York: Free Press.
- NASSCOM (2005). Report. Retrieved from File://C:/DOCUME-1/ADMIN1-1.JIMS/LOCALS/TEMP/296/NZVEL.htm on 23 Jun 2006.
- Pareek, U. (1997). *Training Instruments in HRD and OD*. p.668. New Delhi: Tata Mcgraw Hill Publication Co. Ltd.
- Pareek, U. & Rao, T.V. (1981). *Designing and Managing Human Resource Systems*. pp.125-127. New Delhi: Oxford & IBH Publishing Co.
- Pareek, U., Rao, T.V. & Pestonjee, O. (2003). *Behavioural Processes in Organisations*. Pp. 241-244. New Delhi: Oxford & IBH Publishing Co.

Role of Management Information System in Indian Universities

Abstract: *It is a well-known fact that every organisation, be it an industry or a university needs an effective information system [IS]. An IS helps the management, i.e., planners and decision-makers to take timely decisions to achieve the desired goals. Therefore the role of a Management Information System (MIS) becomes very important in a university in the present scenario. The present paper throws light on the role of management in Indian universities, its dimensions, functions, levels and its information requirements. The nuances of decision-making in university administration are also highlighted and discussed. The study also assesses the importance of IS in the decision-making process of the management. The concept of MIS and its components are discussed and its effectiveness in university management is reviewed at both the international and national levels. Based on this review a computerised MIS is proposed for the Indian universities and all its ramifications are also discussed.*

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A. K. Saini***

Introduction

UNIVERSITY is a body of academic people engaged in the pursuit of academic matters. Like any other large-scale organization, a university or an educational system consists of many interlocking and interdependent units or components; such as teaching departments, various branches, distance learning department, etc.

There are three levels of management, such as top, middle and lower level. Top level management deals mainly with policy matters while lower level management implements these policies. Middle level management has to see how the policies laid by the top management are implemented and get the work done by the lower management.

Management Information System (MIS) which is analogous to the term Information System (IS) plays a crucial role in the management of any contemporary enterprise such as a small or medium or large organisation, a profit-making or social service organisation, a public or private sector undertaking, a manufacturing or service sector organisation, a local or global corporation or an upcoming or established business house. The fast changing scene of globalisation, liberalisation, and competitive environment combined with a never before emphasis on quality, timeliness, innovation, client orientation and efficiency puts a premium on accurate super fast and timely dissemination of information across the whole world. The unprecedented developments in the field of computers and communication technology have indeed made such demands, realisable goals. Thus, a large portion of the world population has its stake in computer based MIS.

This paper contributes conceptual framework for the research study. It throws light on the concept of MIS as well as its components namely management, information and system. Further, the role of management, its dimensions, functions, levels, their information requirements etc. are also explained. It evaluates the value and role of information and assesses the importance of information technology in the decision-making process.

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Background

Different schools of management have different opinions regarding the concept of management. Every school of thought tries to consider only one aspect or the other to explain the concept of management (Stoner, 1998). According to scientific management, management means determining scientifically the best methods for performing any task and for selecting, training and motivating workers. The classical school grew out of the need to manage large and complex organisations and explain management as attempting to identify the principles and skills that are required for effective management. The behavioral school, in which a group of management scholars are trained in sociology, psychology and related behavioural disciplines, uses their diverse knowledge to propose more effective ways to manage people in organisations. According to the management science school, the management scientist uses the mathematical techniques for modelling, analysing and solving management problems. According to the system approach, the organisation is looked upon by the manager as a unified whole, directed system of interrelated and interdependent parts and as a part of a larger, external environment. The contingency approach focuses on the interdependence of the many factors involved in the management situations.

The most accepted definition of management i.e. management is a distinct on-going process of allocating inputs of an organization by typical functions for the purpose of achieving stated objectives (or outputs). Every organization receives inputs, transfers these inputs through the managerial functions/ processes in an effective and efficient manner to produce desired outputs (Dharminder and Gupta, 2006).

Management levels and their information requirements

To run a university effectively and efficiently, the top management has to perform the different activities of planning, organising, staffing, directing and controlling. So he/she requires information. The main emphasis of IS is to generate information which is required by the university authorities.

There are mainly three levels of management in every university, i.e., (i) top level, (ii) middle level and (iii) lower level management (Rowley, 1994).

(i) **Top or strategic management:** It performs the activities of planning and strategy formulation. For example, in a university system, includes evolving strategies to start new academic programmes, offering vocational streams, offering flexibility of duration through part-time or distance learning programmes etc. The owner, which is the Executive Council/University Court/Academic Council; headed by the Chancellor/Vice-Chancellor, performs these functions, and is assisted by other functionalities of the university.

(ii) **Middle or tactical management:** It is concerned with overseeing the performance of the organisation. This includes monitoring the extent to which the objectives are being met, and controlling those activities that move the organisation towards its goals. In a university system, the Heads of Departments/Chairpersons, Deputy Registrars and Assistant Registrars/Administrative Officers are assigned the responsibility of looking after various operational management personnel in each specific area.

(iii) **Lower or operational management:** It is concerned with the day-to-day operation of the activities of the organisation. The primary concerns are schedules, deadlines, human relations, cost and quality control etc. For example, the Section Officer/Superintendent/Clerk will ensure that the daily work such as bills, cheque preparation, date sheet, declaration of result, preparation of detailed mark sheet, etc. is cleared. The teaching staff of the departments performs the duties of teaching, ensuring discipline in the departments, preparation of the time-table, evaluation and many other duties assigned by the Head of the Department/ Chairperson/University from time to time.

The main job of the competent authority is to take decisions based on the information gathered from internal as well as external sources. The work of the top management is to make plans and so he/she needs detailed information relating to the external environment. Thus, the information needs of the top management is more from the external environment and this information is increasingly summarised as it moves down to the middle and lower levels. While the information needs of the lower level is satisfied from internal information and it is generated within the organisation and it gets summarised as it moves up the successive levels of management, i.e., the upper levels.

Information system

In the era of IT, the managements of universities spend a large part of their valuable resources, such as time, money and energy to generate, process, use and distribute information. Information, as message, has already been recognised as the sixth resource of an organisation in addition to men, machines, materials, methods and money. Apart from the commercial organisations, even the service organisations, such as hospitals, banks, insurance companies etc., use information in their own way to serve their clients, and a university is no exception. Generally, in service organisations information plays the major role as compared to the other resources of the organisation (Forkner, 1973).

Information is the result or product of processed data. Information can be defined as data that has been converted into meaningful and useful form for a specific context for a specific user (O' Brien, 1999). The process that converts data into information is known as IS. An IS is a network of steps that collects and transforms data into information. A series of at least nine basic steps form an IS. These are collecting, recording, sorting, classifying, calculating, communicating, storing, retrieving, and reproducing (Levey, 1973). Information system is also defined as a set of organised procedures which, when executed, provides information to support decision-making (Lucas, 1978). Figure 1 shows the schematic representation of an information system.

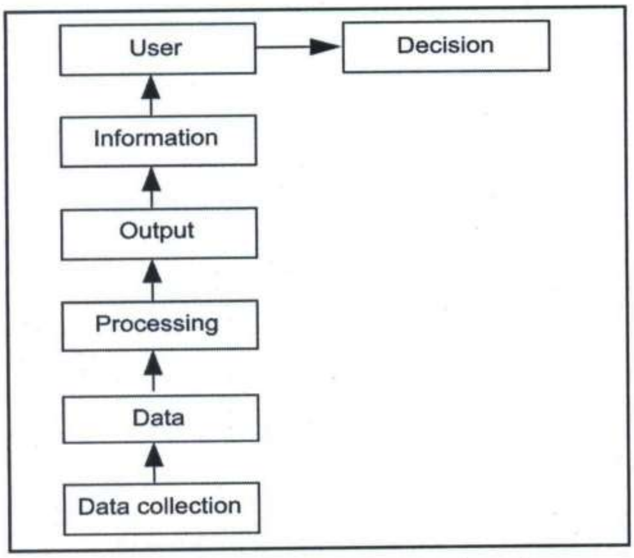

Figure 1. Schematic representation of an information system

The complexities of the modern organisations demand new dimensions in modern management. Perhaps, the most profound and promising of these dimensions is the emerging utilisation of computer-based information systems (CBIS).

Computer-based information system

Although IS has been in existence in organisations for a very long time, a fresh impetus has been given to it by the introduction of computers and communication technology, amalgamated as IT. Information technology refers to use of computer hardware, software and data communication equipments. The IT permits data to be electronically collected, transmitted, stored, processed, retrieved and displayed more rapidly, accurately, completely, economically, flexibly and within an acceptable time frame than ever before. Information technology helps the management to utilise scarce resources such as manpower, money, materials, machines and knowledge more efficiently, economically and effectively. This is of paramount importance in a university system. Information technology affects every department in a university system as all of them need to receive and transmit data as part of their normal operations. The use of technology in educational institutes is essentially a quest for greater productivity. They need to make the most of dwindling educational budgets and create pressure for more efficient use of scarce resources. Achieving these efficiencies requires, among other things, the information necessary for good management and decision-making. Obtaining this information and presenting it in a useful form is a complex, technical and organisational task. The availability of CBIS and its attractive promises of efficiencies look like the best way to cope with the increased demands of scale and reporting requirements.

The basic functions of planning and control mostly depend on the access to CBIS that makes the decision-making more structured. The major advantages of a CBIS (Rowely, 1994) are: (i) exceptionally high speed in data handling, (ii) less duplication of effort in the maintenance of databases, (iii) more accurate data, as sources of error are reduced, (iv) better communication within the organisation since everyone has access to the same information, (v) information can be secured from unauthorised access, and (vi) a coordinated approach to the information needs of the organisation. The CBIS enables the decision-makers to devote more time to analyse the decision-making criteria and to implement new problem-solving approaches, resulting in improved organisational effectiveness.

University as an educational system

In recent years, the demand for quality education has sharply increased due to improved socio-economic and other conditions. This has resulted in the widening of the gap between the availability and demand for quality education in India. The universities in India are mostly tradition-bound and their organisational structure is monolithic and rigid. They are not designed to meet the changing demands for variety in educational courses and programmes in the country.

A university is a community of students, teachers, and other supporting staff who come together with the goal of learning and expanding the bounds of human knowledge. A wide variety of services needs to be provided to this community. To effectively provide the services, the university needs to be considered as a complex system where its components interact with each other to achieve the goal of providing best services to the students and employees alike. To understand the flow of information in a university environment, it is essential to view the services as a system comprising of many subsystems, such as examination, finance, personnel, stores, maintenance, planning, etc., Figure 2 shows a university and its subsystems. In service institutions, such as a university, the organisational structures are made up of interrelated and interdependent parts, and one part or subsystem cannot perform effectively without the other (Mehendiratta, 1984).

The coordination among the various subsystems is essential for the smooth functioning of a university system. The basic components of a university system continuously interact with one another to render what can be termed as the 'output' resulting from certain inputs fed to the university system.

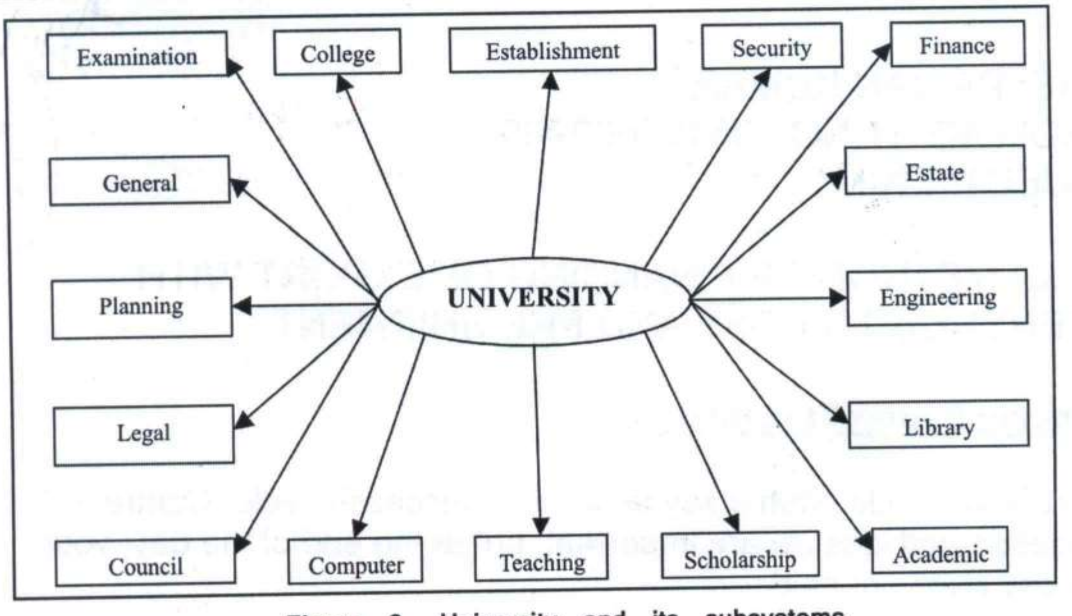

Figure 2. University and its subsystems

Management in universities

Universities in present day socio-economic milieu have assumed great importance. A university as an organisation consists of teachers, researchers, students and administrators. Their functions may be either academic or management. The management functions include planning, organising, staffing, directing, coordinating and controlling. Although a university organisation also has men, machines, materials and money, the emphasis is more on information processes rather than production processes. Yet the characteristics of the participants in universities differ from those in other organisations and therefore, their decision-making processes are unique or different in some respects. Their effective management is essential for the optimal utilisation of resources and for providing maximum benefits and satisfaction to their clientele. From the management point of view, a university is an open system with all the consequent characteristics. There is a need for scanning the environment around the university to identify the external opportunities and threats and scanning the institutions to identify the internal strengths and weakness so as to determine the missions, goals and objectives, the clientele, the programme mix, including their comparative advantages, leading to the planning of the different subsystems like financial, academic, etc. (Sanyal, 1995).

Therefore, the universities need to be organised and administered in a truly scientific manner by utilising the modern management techniques and tools that are being used in other organisation. It has been observed that educational institutions generally do not utilise the managerial tools, such as MIS, that are commonly used in industry.

Need for computerisation in universities

The day-to-day operations of a university system involve handling of vast quantities of information. The multiplicity of functioning leads to an information flow that is highly variable in content, format and importance. The present day services involve manual collection and retrieval of information that is both a mammoth and a time-consuming job. Further, the administration is the least effective because of lack of resources and facilities. To add to the problem there is voluminous paperwork to be handled, which often means the non-availability of relevant data when required. There are often delays in getting the data, which can neither be stored nor easily analysed.

Administrative computing is assuming an ever-increasing role as the demands being placed on universities escalate; demands due to the increasing number of students, and greater demands for sound financial management and planning. As computing costs decline and methods change, universities must develop planning strategies to ensure that the new technologies and procedures are employed effectively. Nevertheless, the wise and careful use of computer technology can help to maintain quality while managing costs in today's highly competitive environment. The rapid availability of complete information can result in savings/expenses. Therefore, all functional areas should be interlinked so that data entered into the system from any of these points may be accessible and used by all concerned. Today the computerised MIS has been accepted as an integral part of a modern university system for the fast retrieval of timely and accurate information (Achuthan, 1993).

The primary reasons that demand the introduction of computers so as to strengthen the IS are (Goyal, 1993):

1. To increase organisational efficiency through reduction in the overall costs/expenses.

2. To provide useful, accurate, complete and timely information to meet the requirements of the various departments requiring such data.

3. To improve managerial effectiveness in planning, allocating and controlling the scarce and expensive resources of the organisation.

4. To improve and ensure high quality of service at a reasonable cost.

5. To improve the MIS.

6. To reduce the clerical workload.

Therefore, in our view, a good university must have an efficient real time communication network, which ensures that the pertinent data needed for the performance of various activities can be retrieved upon demand, resulting in several benefits for the organisation and its users alike.

Management information system

Management information system is better known by its acronym MIS. It provides the managers with information about the activities for which they need to make sound decisions. A few definitions of MIS given by various management researchers are: (i) 'MIS may be defined as a set of well-knit scientifically designed procedures whereby raw "data" get converted into decision-based and control oriented "information" and continuously and regularly flow from one end to another' (Chatterjee, 1974), (ii) 'Management information system is a method of providing the right information, to the right person, in the right form at the right time' (Jain, 1978), (iii) 'MIS may be defined as an organsed scientific method that will provide timely, relevant and accurate information, in a meaningful form, of past, present and future, relating to internal operation of an organisation and external intelligence which enables management, at all levels to make decisions aimed at optimising (achieving) goals of the organisation' (Mahalanabis, 1974) and (iv) 'MIS is a system that includes all components, human as well as non-human and aids the process of management in an organisation' (Kapur, 1982).

Management information system in universities

In this section, the development and present status of MIS in various international universities has been reviewed.

In Sweden, the University of Uppsala has produced the first systems for salaries and student registration, which were adopted by most universities. A National Centre of Super Computers was created and the universities were connected to it in a network. At present most universities have a local system, which allows the management to decide which data to produce for their needs (Furstenbach, 1991).

The experience of Ceara University showed that the development of a multi-institutional system is advisable since it considerably reduces the costs and time of every institution in the group (Hirsh, 1991).

In Brazil, a MIS was first developed in the University of Sao Paulo in the late 1980s. The IS has various subsystems, such as flow of documentation, finance, staff, academic affairs, libraries, university press and bookshops, academic productivity, electronic mail etc. The university had to arrange a five/six days training for institutional managers, faculty heads and managers of central administration on the whole system and its use as a managerial tool. The system now produces online managerial reports to support evaluations using performance indicators, planning and decision-making. The impact of this experience motivated several other Brazilian institutions to adopt the same management information system (Marin, 1991).

A study of the MIS in Shantou University, China, where the system was set up in 1990, showed the stages of development of MIS where the basis changed from mono-computer environment to network environment; the operational pattern changed from mono-user to multi-user and the relation between each sub-system changed from the state of being independent to the state of being interdependent (Sanyal, 1995).

In the Netherlands, the University of Twente has a decentralised system of finance in which 73 information processes are operated, which collect 165 types of information in 10 clusters (education, research, social services, management control, finance, staff, material, project services, general services and campus), each of which is covered by an information plan, i.e., who needs what information and for what purposes(Schutte, 1991).

An information system necessarily must deal with quantified data. Because of this, many administrators, particularly those dealing with academic programme have become concerned that the information system will eliminate the quality factor from consideration. Several potential solutions exist. The information system designer should be aware of this danger and attempt to avoid it. Management, too, must learn to utilise information system outputs interpretively (Roger, 1973).

Besides universities, many other institutions have also begun to provide training. Many private providers have come up to develop programmes in education, and in software development, India has made a headway. A task force was set-up by the Ministry of Human Resource Development (MHRD), Government of India, on this aspect. The task force made many recommendations for the development of integrated

IS through networking at the university level (Sharma, 2002).

Radical reforms, legal and managerial, in the system of governance of universities as well as academics and examinations are urgently required. The application of IT in managerial activities in all academic institutions of higher education should be made mandatory (Dharm Vir, 2005).

MIS works at three levels of university administration, namely, operation level, tactical level and strategic level.

The operational level of MIS consists of all those sources of information which are under direct control of the university and with whom the university has to deal in its routine course of business. At the tactical level of MIS, information regarding decision-making is required. These decisions are specifically based on the information collected from operational level sources. At tactical level information has its impact on the credibility of university decisions and on the short-term success of university functioning, the information has to be screened very carefully. Strategic information is usually supplied to all external and controlling institutions. This information has to be based on the operational and strategic levels and is supplied by higher authorities of university administration. As a result of recent developments in the field of computer, electronic data processing system and information technology, it has become possible to develop a highly effective information system for management planning and control in the universities (Kaptan, 1990).

The management of universities can be well organised, if we are able to convert the working and decision-making process into the MIS model. The MIS could effectively be used to simplify the decision-making process. An effective university management information system needs a database suited to its specific goals and requirements. The important components of the university administration are academic, examination, establishment and finance, in addition to others (Ahmad S., 2002).

Conclusion

The university comprises various sub-systems for the smooth running of the total system. All the sub-systems need to be properly interlinked and coordinated for effective functioning of the university administration. The application of computers has increased phenomenally in universities all over the world for many reasons, including labour saving, improved revenue collection, high satisfaction of students and staff and better planning. The Indian universities also must ensure that the new computer technologies and procedures are employed effectively for administration and management. The management of Indian universities can be well-organised if it is able to convert its working and decision-making process into an MIS. If the MIS of a university is equipped with modern equipments, particularly computers, it may bring fruitful results, i.e., information would be optimally utilised. Therefore, to achieve the objective of an efficient university management, a computerised MIS is the only solution in front of the university administration in the twenty-first century.

References

- Achuthan, Sarla, Binod, C. & Agarwal, (1993). *Computer Technology for Higher Education, An Overview*. New Delhi: Concept Publishing Company.
- Ahmad, S. (2002, Nov. 18-24). Management Information System; Tool to enhance efficiency of university management. *University News*, 40(46), 12-17.
- Chatterjee, B.K. (1974, Aug.). Management Information System: A Conceptual Framework. *Management Accountant,* 9(8), 585-587.
- Dharm, V., & Keya D. V. (2005, March 6). Tech Education and Research: IITs show the way. *The Sunday Tribune, Chandigarh*. P.12.
- Dharminder, K., & Gupta, S. (2006), *Management Information Systems: A Computer oriented approach for business operations,* New Delhi, Excel Books, p. 93.
- Forkner & McLeod (1973). *Computerised Business System: An Introduction to Data Processing*: p. 16. New York: John Wiley and Sons.
- Furstenbach, J. (1991). Computerised Management in Swedish University in *CRE Action*, No. 95, 1.
- Goyal, R.C., (1993). *Handbook of Hospital Personnel Management*: p. 241. New Delhi: Prentice Hall of India.
- Hirsh, E. (1991). Paper for IIEP.
- Jain, J.C. (1978, June) Management Information System Concepts. *Chartered Accountant,* 26(12), 761-767.
- Kaptan, S. (1990, August 27). Management Information System and University Administration. *University News*, 6-13.
- Kapur, J. C. (1982, November). Management Information Systems: A Conceptual Framework, Part-I. *Indian Management*, 3-6.
- Levey, S. & Paul, L.M. (1973). *Health Care Administration: A Managerial Perspective*: pp. 58-59. Philadelphia: J.B. Lippincott Company.
- Lucas, & Henry, C. (1978). *Information Systems Concepts for Management*: p. 5. New York: McGraw Hill Book Company.
- Mahalanabis, D.K. (1974, June). The Concept of Management Information Systems. *Management Accountant,* 14(6), 553- 558.
- Marin, H. (1991, January). *Computer aided management in higher education: A model adopted by Brazilian Universities, Paper for CRE* Colombus meeting.

- Mehendiratta, P.R. (1984). *University administration in India and the USA*. New Delhi: Oxford and IBH Publishing Co.
- O' Brien, J.A. (1999). *Management Information Systems*: p. 46. New Delhi: Tata McGraw Hill.
- Roger, W.C. (1973). *MIS in Higher Education*. MIS: Management Dimension. San Francisco: Holden-Day Inc.
- Rowely, J. (1994). *Strategic Management Information Systems and Techniques*: pp. 5-6. Blackwell Publishers.
- Sanyal, B.C. (1995, January). *Report on Mission to China, UNESCO IIEP*. Paris.
- Schutte, F. (1991, January). *Impact of information policy on university management*, Paper for CRE Colombus Meeting.
- Sharma, G. D. (2002). *Information technology for management of higher education*. Paper published in reading material of leadership development programme, conducted by Society Education and Economic Development, 1-23.
- Stoner, J.A.F. (1998). *Management*: p.7. New Delhi: Prentice-Hall of India.

Salaam Mumbai and Salaam Mumbai Dabbawalas

Abstract: *The unprecedented rains in July of 2005 left Mumbai, and much of Maharashtra, in troubled waters. Despite the meteorological department's warnings of 'heavy to very heavy rains' and educational institutions being closed, office goers went out in strength. To restore normalcy the dabbawalas (tiffin box suppliers) of Mumbai were in action and did a better job than any other official. They carried messages of the clients to their homes along with their tiffin boxes. The Mumbai Tiffin Box Suppliers Association is a well-organised profit-making business enterprise. It has been studied in the London School of Economics as an 'amazing and excellent business model'. This paper discusses the strengths, weaknesses, opportunities and threats of the dabbawalas to analyse their efficiency during the worst conditions, such as the monsoons.*

Sanjeev Bansal*
D. Surekha Thakur**

The legend

SADDLED with a growing population in the late nineteenth century, new settlements, further from the original in the Old Fort complex, started cropping up in Mumbai. Ballard Pier and Fort still remained the business centres and they housed most of the banks, government departments, insurance houses, shipping companies, etc. The history of tiffin box carriers runs parallel to the history of Mumbai's development. The origin of the dabbawalas can be traced to the year 1890. Though most of the dabbawalas are illiterate they are the ultimate practitioners of logistics management. They follow the perfect Time-Management Theory and Supply Chain Management principles. They seem to have been following these strategies long before these terms were even identified.

In 1890, a Parsi broker working in Ballard Pier employed a young man, who had come down from Pune district, to fetch his lunch every afternoon. His business picked up through referrals and soon the pioneer tiffin-carrying entrepreneur had to call for more helping hands from his village. Though there were no umbrella organisations for the carriers then, the first informal attempt to unionise was made by Mahadev Havji Bacche in 1930. A charitable trust was registered in 1956 under the name of 'Nutan Mumbai Tiffin Box Suppliers Trust'. Even today every carrier is expected to contribute Rs 15 per month towards the trust.

The commercial arm of the organisation was registered quite later in 1968 as 'Mumbai Tiffin Box Carriers Association'. With recruitment essentially being carried out through word of mouth, the majority of the carriers hail from neighbouring towns and villages in western Maharashtra. They have a strong social bond, common language and pride in whatever they do. The system is similar to the postal system; the tiffins are collected, sorted out, and sent to their destinations based on a numerical and alphabetical code. Every station has a numerical code and each place has an alphabetical code. The tiffin carries the code of the source and the destination. The codes help to identify each tiffin owner. The strength of the system depends on common protocols, disciplines and a shared agenda.

Virtually all dabbawalas are migrants from rural villages near the city of Pune, eighty miles southeast of Mumbai, and obtain their jobs and learn the trade through family ties. They wear the traditional white cap and clothing of their region. In 'Mumbai's Dabbawalla: Omnipresent Worker and Absent City-Dweller', an article in the March 29, 1997, issue of Mumbai's the *Economic and Political Weekly*, the French researcher Alexandra Quien explains that the carriers identify themselves as Marathas, a Hindu group with a martial heritage, and their names suggest roots in the Kunbi agricultural caste. Their families, often poor, remain in the villages, and the dabbawalas' earnings help support them and finance

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the expansion of their farms. The tiffin carriers visit their home villages frequently and usually retire there.

According to a dabbawala, 'Our confidence is made tough by sheer practice. Travelling the toughest roads of Mumbai on our bicycles no matter what hurdles may lie ahead, the destination is reached. But the sum of Rs. 4000 received per month is not enough to survive in the city like Mumbai. I send Rs. 2500 to my family in my village. My family consists of my wife, two sons, one daughter and my old father who is sick.' The life of a dabbawala is at stake at every bend of the road along with the future of the family, which is questionable.

The Management Gurus have recognised the 'Mumbai Dabbawalas' as the best example in the field of Network Management and Supply Chain Management. For years, Mumbai's legendary lunch-delivery system run by mostly illiterate 'dabbawalas' was an institution that did not go beyond the city's borders. Now the low-tech network, known for its clockwork precision delivering dabbas (metal lunch boxes), or tiffin (lunch), is giving tips to the high corporate flyers on the basics of management and planning.

The strategies followed by the Mumbai dabbawalas are Supply Chain Management principles, which they have not studied in any school for they were mostly illiterate. The experience gained by them is totally by practice of logistics.

Issues

The dabbawalas are very determined lot. There is no hierarchy of boss and employee. This is something very radical but very useful in business. When you have to deliver, irrespective of bad weather or late trains, having that kind of ownership in the business evokes a high level of dedication from people in the logistics network. Following are the issues, which are carried out by dabbawalas.

1. Mare, a dabbawala, for instance, handles 5000 tiffin carriers, which supply food to 2 lakh office goers every day. But there is little reward for his labour.

2. The growing commuter traffic on suburban trains and rising costs of living in Mumbai and the torrential rains have made the going tougher each year for 'Nutan Mumbai Tiffin Box Suppliers Trust'. But good, bad or indifferent, it is a business they have built together and understand really well.

3. Rains are evident but the Brehanmumbai Municipal Corporation (BMC) should take more measures in building a proper system to safeguard the city from such calamities and stop flooding of water in streets.

4. The dabbawalas have to battle a crush of people in sweltering stations, broken elevators which often force them to climb dozens of flights, torrential monsoon rains and speeding taxi rivers that threaten to upset their tiffin carts. Still, the lunch boxes reach offices between 11.45 am and 12.30 pm.

5. Since the operational infrastructure is huge, the problems can crop suddenly and unceremoniously during monsoons.

6. To avert any sudden crises, the appropriate alternative replacement for both men and material must be in place to cope with the exigencies of the situation, for example, a sudden break down and crippling of the railway system, the accident of a field staff, natural calamities ravaging the city, (such as earthquakes, torrential rain), and terrorist activities, (such as the 1990's bomb blast throwing normal life out of gear).

7. The additional financial obligations arising from the emerging threats should also be taken into consideration. For coping with sudden financial liabilities accruing on account of natural calamities, such as the Mumbai floods, the 'Mumbai Tiffin Box Carriers Association' should outsource its business, efforts and alternative transportation sources for the delivery boys and the overall requirement of the working capital. The management should adequately provide for the inflationary trend in the economy while formulating the policy decisions.

8. In the July, 2005 rains, the dabbawalas waded in water and ensured that their customers received their meal. The Municipal Corporation of Greater Mumbai (formerly Bombay Municipal Corporation) or the BMC, which is the richest municipal organization of India, could make more effort to resolve the situation by strengthening the infrastructure to a greater extent.

Marketing strategy

The medium through which business is picked up is referrals, that is, word of mouth. Each day the clientele increases and so does the number of the delivery boys. The charge is Rs. 325 per client per month, which is affordable by the working class. The recruitment policy is such that even before a new recruit leaves his hometown for Mumbai, his area of operation and remuneration are decided. Typically a carrier averages about Rs. 4000 (US$85) per month and this is attracting a lot of educated youth who are finding it tough to break into the white-collar ranks of the city.

The journey

The journey of each lunch begins early in the morning from the home as food cooked by a devoted wife or mother while her husband or son is enduring the crush in the train. She arranges the rice, *dhal*, *subzi*, curd and *parathas* into cylindrical aluminum trays, stacks them on top of one another and clips them together with a neat little handle. This tiffin box, unlike a slim paint tin, is the lynchpin of the whole operation. When the runner calls to collect it in the morning, he uses a special colour code on the lid to tell him where the lunch has to go. At the end of his round, he carries all the boxes to the nearest railway station and hands them over to other dabbawalas for the trip into town. Between leaving the wife and reaching its final destination, the tiffin box will pass through at least half a dozen different pairs of hands, carried on heads, shoulder-poles, bicycle handlebars and in the brightly decorated handcarts that plough with such insouciance through the midday traffic. Tins are rarely, if ever, lost, and always find their way home again (before the client returns from work) to be washed up for the next day's lunch.

As every tiffin-box had to travel to and fro, mapping every box to its carrier was crucial. For this purpose, some carriers started tying string to their boxes while others used colorful wires and threads. But soon these methods were found inadequate as the number of tiffin boxes grew exponentially. So in the early 1970s, the senior founder members of the association decided to implement a new system of working where box codes and markings were uniform for all carriers.

For example, if a client is a resident of Thane and his office is located on the third floor of Mafatlal Centre at Nariman Point, the code would be something like 9 MX 3 on top, where 9 points to the carrier who delivers in Nariman point, MX for Mafatlal Centre and 3 for third floor. The number 10T below it, where 10 is the code for Church Gate station where the box is off-loaded, followed by alphabet T, where T stands for Thane, the railway station of origin.

So whenever the tiffin-box is collected from a client's residence and brought to Dadar railway station, it is kept with the boxes headed for Church Gate station. At Church Gate, the carrier whose code is 9, picks up all the boxes marked for him and proceeds for Nariman Point. In Mafatlal Centre he leaves this particular box outside the lift or outside the client's office on the third floor. During his lunchtime, the client fetches his tiffin-box, completes his lunch and puts the empty box in the same place outside the lift for the carrier to collect it back. The return journey takes the same route. There is hardly any daily contact with the client. The carrier meets the client only on the first day of the delivery to verify the address and to show the spot where the boxes will be kept.

Enduring factors

Following are the enduring factors which are briefly discussed:

1. Plentiful commuters;
2. Presence of an efficient and widespread railway networks;
3. Large distances between places or residents and work.

Every day about 2,00,000 meals are delivered by this operational system at an average cost of Rs. 325 per month with an annual turnover of Rs. 50,000,000 and 4500 carriers who meet and exchange lunch-boxes at public places like the railway station without ever causing a jam or any confusion, just like a well-oiled olympic relay team. Lunch-boxes are sorted and exchanged in a jiffy, with absolutely zero documentation involved. Yet rarely has it happened that a lunch has missed its destination.

Appreciation

In 1998, the Forbes Global magazine conducted a quality assurance study on the dabbawalas' operations and gave it a Six Sigma efficiency rating of 99.999999; the dabbawalas made one error in six million transactions (Venkatesh, H. 2006). That put them on the list of Six Sigma rated companies, along with multinationals like Motorola and GE. Achieving this rating was no mean feat, considering that the dabbawalas did not use any technology or paperwork and that most of them were illiterate or semi-literate.

Analysis

The unprecedented rains of July 2005 left Mumbai, and much of Maharashtra, in troubled waters. There was no accountability in the city and on July 26, people were left to fend for themselves. Despite the meteorological department's warnings of 'heavy to very heavy rains', office-goers were out in strength. There was a little help, but not to the extent so as to reduce the pain for people drastically. The flood receded on its own and the suffering of people reduced further by the action from Maharastra State Government and the Government of India. The dabbawalas were in action and they carried messages of the clients to their homes along with their tiffin boxes. The Mumbai dabbawalas made it possible and, therefore, 'Salaam Mumbai and Salaam Dabbawalas'.

The Mumbai Tiffin Box Suppliers Association is a well-organised profit-making business enterprise. With the account given above it can be understood that it has not only trained their dabbawalas in Supply and Chain Management but has also taught them the human values, which set the dabbawalas as a perfect model to study. After the internal analysis of the Mumbai Tiffin Box Suppliers Association through Strengths, Weaknesses, Opportunities and Threats (SWOT), this analysis has been implemented to study the efficiency of the dabbawalas during the worst conditions of the monsoons.

Strengths

The service is uninterrupted even on days of extreme weather, such as Mumbai's characteristic monsoons. The customers know the local dabbawalas at the receiving and the sending ends personally, so there is no question of lack of trust. Also, they are well accustomed to the local areas they cater to, which allows them to access any destination with ease. Occasionally, people communicated between home and work by putting messages on chits inside the boxes. Of course, this was before the telecommunications revolution.

Weaknesses

While Mumbai takes riots and political upheaval in its stride, it has no answer when the weather turns foul. Heavy rains in Mumbai disrupt rail and road traffic even as gusting winds uproot more than 100 trees bringing normal life to a complete standstill in India's business capital. For the rail commuters, especially for the dabbawalas, the day starts with a long, tiring wait for trains and getting drenched in the rain. The dabbawalas are totally dependent on transportation and any disruption in it may stop their routine activity. They have to find alternative means.

Opportunities

Even when trains are marooned on the tracks, many dabbawalas jump to get across to the nearest road to board a bus or taxi or even hitch a ride on a cycle. Work ethics in a city like Mumbai is high and most people try their best to get to work even in the worst weather conditions.

Many national and international interests are taking initiatives to study the Mumbai dabbawala techniques and funds are donated to the association for the welfare of the dabbawalas. The MTBSA (Mutamumbai Tiffin Box Supplier Association) is planning new schemes to help its members and shareholders by implementing the short-term loan scheme, medical facilities and insurance to the dabbawalas. The daily routine of the dabbawalas makes them accident-prone, their families are totally dependent on them and, therefore, the MTBSA should see to it that some sort of insurance and benefit is provided to their families.

Threats

At least 190 trains were delayed and 51 cancelled during the Mumbai floods due to signal problems and waterlogging in Bandra, Mahim, Parel and Mumbai Central. Even long distance trains were delayed though they began running on time by the afternoon. The Central Railway, too, had its share of delays and cancellations with trains running 30-45 minutes late until 10.30 am. Mumbai has better drainage system than most other cities in India. But it has a huge population, and a worse traffic scenario. Traffic jams stretch for miles along the roads. Subways and side routes get closed off due to flooding, and the pressure falls on the main routes. At least in the western suburbs, the flooding of Andheri subway and other parallel subways lead to a very high pressure of traffic on SV Road and the Western Express Highway, and cause endless traffic jams with the railway services being disrupted.

Teaching notes

The analysis and the data suggested above in the case study accept that it would not be an exaggeration to say that life in India revolves around the monsoons. From crops and drinking water to weddings and festivals, the rains determine all. On the lifeline of Mumbai, both the Central and Western Railways were completely disrupted and came to a grinding standstill. Thousands of commuters were stranded on the way home or were in their offices far away from home. But true to character, the city responded to the crisis in amazing fashion, not forgetting the challenges faced by the Mumbai dabbawalas.

Does corporate India feel there is anything to be learnt from the dabbawalas' business? From the way the business chambers have been applauding the dabbawalas' enterprise, certainly, yes. Crucial learning includes how this 'Nutan Mumbai Tiffin Box Suppliers Trust' stays in touch with its business on the ground even in crises like the Mumbai rains, how it has grown incrementally on sound financials, and how the ownership and functional structures work in a way that foster commitment. Members of the 'Nutan Mumbai Tiffin Box Suppliers Trust', or the dabbawalas, are a common sight in the city's suburban train routes. Everyday, they deliver 1,75,000 tiffins full of home-cooked meals to the office goers. Add the empty boxes they take back to the respective homes and that adds up to a staggering 3,50,000 transactions a day. But that is not why the Forbes magazine featured them. What amazed logistics experts was how the semi-literate people get the job done with practically no mix-ups at all? In fact, the Forbes study gave the dabbawalas a Six Sigma rating. In other words, only one in a million deliveries by the dabbawalas are to the wrong party!

Questions for disscussion

1. Although the Mumbai dabbawalas have become so famous world wide, in what way is their fame considered to be making their life easy?

2. What are the crucial challenges faced by the dabbawalas during monsoons?

3. What are the initiatives suggested to be taken by the Maharastra State Government and the Government of India to prevent situations like the Mumbai floods?

References

- BBC News: India's tiffinwalas fuel economy.
- Blue Peter episode on Monday, 27 September 2004 (summer expedition report).
- Dabbawalla Moves to Silicon Valley.

- Hart, Jeremy. "The Mumbai working lunch", The Independent Online, The Independent group, London, 19-03-2006 Retrieved on March 20, 2007.
- indianmba.com retrieved on January 18, 2006.
- "Indian lunchbox carriers to attend the Royal nuptials", Evening Standard (London), Associated Newspapers Ltd, 2005-04-05. Retrieved on March 20, 2007.
- Karkaria, Bachi. "The Dabba Connection".
- Management Mantras from Mumbai Dabbawallas. Posted on Sep 5th, 2006.
- Online edition of India's National Newspaper Tuesday, 3 Aug. 2004.
- Thakker, Pradip, Mumbai's amazing Dabbawalas, rediff.com, 11 November 2005.
- Venkatesh, H. 2006, What you can learn from a dabbawalla January 25, 2006.

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Edited Book

Harrington, D.M. (1990). The Ecology of Human Creativity: A psychological perspective. In Runco, M.A., & Albert, R.S., (Eds). *Theories of creativity* (pp. 143-169). Newbury Park, CA: Sage.

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If the journal uses continuous pagination, i.e., it runs page numbers throughout a year or volume; no reference to an issue number is needed. In that case, the title of the journal is italicized, as well as the volume number.

g) If the journal is re-paged issue by issue, i.e., each issue has a page number 1, then the issue number must follow the volume number. The issue number is in parentheses but is not italicized.

i) The next part of the citation is the pagination. The page designation p is **not** used except when citing newspaper articles.

j) If the journal is from an electronic database, retrieval information must be included which states the date of retrieval and the proper time of the database.

k) For more than one publication in one year by the same author, use small lower case letter to distinguish them.

References: Articles (Citation)

Weekly Magazine/Article:

Singh, N. and Srinivasan T.N. (2005, May 21-27). Foreign Capital, Deficits and Growth. *Economic and Political Weekly*, XL, (21), 2196-2197.

Monthly Magazine/Article:

Gupta, K. (2005, May). Durables: On a Fast Track. *Pitch 11*(8), 42-50.

Professional Journal (continuous pagination)

Taylor, M.A. & Callahan, J.L. (2005). Bringing creativity into being: Underlying assumptions that influence methods of studying organizational creativity. *Advances in Developing Human Resources, 7*, 247-270.

(Re-paged issue)

Prasad, T. (2005). Mandi: A Field Sales Campaign for Teaching Personal Selling Skills through Experiential Approach. *IIMB Management Review Advances in Developing Human Resources, 17*(1), 87-94.

13(C) Other References (Citation)

Newspaper article

Maira, A. (2005, February 25). Putting humanity into capitalism. *The Economic Times*. P.16.

Computer Software

Soldan, T.J. & Spain J.D. (1984). Population growth [Computer software]. City, state (2 letters): Conduit.

Electronic Database

U.S. Department of Labor (1991). What work requires of schools. Retrieved August 15, 24, from http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf

Paper Presentation

McCollum, E.E. & Callahan, L.L. (22, November). *The narrative assessment interview: The use of a psychoanalytic tool to evaluate a leadership development program.* Paper presented at the American Evaluation Association Conference, Washington, DC.

Ph.D. Thesis

Antony, D. (2005) "*Human Resource Development Practices and their impact on Organizational Effectiveness (A Study of Selected Industrial Organizations)*", Ph.D. Thesis, University of Delhi, Delhi.

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Dr. R.K. Dhawan, Chairman, (Northern Region), FIEO, delivering a special talk on "India-China: Business Opportunities".

Dr. R.K. Dhawan, FIEO, and Prof. Debashis Chakraborty, IIFT speakers in a Seminar on "Intellectual Property Rights" jointly organised by TIAS & FIEO.

Dr. C.S. Venkata Ratnam, Director, IMI conducting FDP on "Role of Faculty in Management Institutions" at TIAS.

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