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From the Editor's Desk

We are delighted to present the First Issue of "Quest - A Journal of Management Research" (QJMR), initiated by Tolani Institute of Management Studies (Popularly known as TIMS), Adipur.

This refereed journal aims to become a serious vehicle for inspiring and disseminating research in business and management field in India. The scope of journal is kept wide to provide platform for diversity of intellectual pursuit from the academic and practitioners with substantial experience to contribute to the business and management research. The journal particularly welcome empirical studies on any aspect of business and economic issues in Indian context.

This first issue focuses carry empirical research papers on monetary theory and its application in India context, financing of higher education, customer service quality perceptions in Indian banks and an exploratory study of behavioral finance in Indian context. We hope that this modest beginning will be a small step in the right direction towards creating a journal that will have impact on the management research in Indian context.

We are committed to bring out the relevant and application oriented research through the platform of Quest. Your constructive feedback is most welcome to propel continuous improvement.

Quest Editorial Team

SERVQUAL versus SERVPERF: An Assessment from Indian Banking Sector

**Bhavesh Vanpariya
Parthasarathy Ganguly**

Abstract

Although a great number of research studies for service quality take place in the context of developed countries, similar studies in the context of developing countries are limited. This descriptive study focuses on the issue of measuring of service quality in banking sector in a India. In line with the above stated purpose, this paper attempts to examine the applicability of two popular measures of service quality in the banking sector in Indian context. The two popular multi-item scales of measuring service quality are SERVQUAL (developed and modified by Parasuraman et al.1985, 1988, 1991,1994) and SERVPERF (a performance-only measure of service quality suggested by Cronin and Taylor, 1992,1994). While measuring service quality through these scales, the dimensionality, reliability and validity of the said scales are checked in Indian context. Also, the correlations of service quality with customer satisfaction, positive word-of-mouth and loyalty are examined. From a diagnostic standpoint, SERVPERF shows empathy dimension needs more resources as it is having lowest performance score (P). However, SERVQUAL shows the greatest gap occurs in reliability dimension, which requires more resources.

Key Words: SERVQUAL, SERVPERF, reliability and validity of Scale

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SERVQUAL versus SERVPERF:

An Assessment from Indian Banking Sector

“ The customer's mind is still closed to us; it is a 'black box' that remain sealed. We can observe inputs to the box and the decision made as a result, but we can never know how the act of processing inputs truly happens.”

-John E. G. Bateson

Introduction

According to the US news and world report market research on lost customers by major companies shows that 14% of the customer left for better product, 9% for cheaper product, 68% left because of poor service (service provider's attitude) which can be easily avoided by designing effective customer Service process, which enables the company to respond. The study clearly demonstrates the significance of soft service quality in relation to product quality. (Sahil, M.S.,2005)

It is in this context we need to stress on the service quality part as 68% of the customers desert the service provider because of poor service quality. The behavioral/attitude

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component of service is major determining factor on the growth of the company, which complements the performance for complete customer satisfaction.

As such, service quality has become a very important issue in marketing and has received much attention since the deregulation of service sector in India, and thus increased competition, of many service industries (e.g.: banking and telecommunications in the 1980's and utilities in the 1990's). Service quality has become so important that some businesses, not only need high levels of service quality for success, but in some cases, need it for survival (Buzzel and Gayle, 1987; Chen, Gupta and Rom, 1994; Ford Motor Company, 1990; Germano, 1992; Hauser and Clausing, 1988; Howcroft, 1993; Kearns and Nadler, 1992; Kettinger and Lee, 1995; Koska, 1990; Lovelock, 1983; Phillips, Chang and Buzzel, 1983; Rudie and Wansley, 1985; Rust, Zahorik and Keiningham, 1995; Schmenner, 1986; Thompson, DeSouza and Gale, 1985).

Service quality is so important that companies have gone to great efforts to evaluate and keep records of service quality levels (Hauser and Clausing, 1988; Phillips, Chang and Buzzell, 1983; Zeithaml, Parasuraman and Berry, 1990). It is essential to determine how to achieve high service quality and how to communicate the benefits of service quality (Howcraft, 1993). Companies such as Federal Express and Xerox are well aware of the importance and have received rewards for their hard work in providing quality services (Germano, 1992; Kearns and Nadler, 1992). By offering high levels of service quality, the Hospital Corporation of America and Ford Motor Company are another two well known

companies that have benefited in terms of higher returns on investment and higher profits (Ford Motor Company, 1990; Koska, 1990). Further rewards can come in the form of increased market share (Buzzel and Gayle, 1987; Phillips, Chang and Buzzel, 1983).

Conceptual Framework:

Service quality is defined as how well the service meets or exceeds the customers' expectations on a consistent basis (Crosby, 1979; Parasuraman, Zeithaml and Berry, 1985). The difficulty, however, is that service quality, unlike product quality, is more abstract and elusive, because of features unique to services: intangibility, inseparability, heterogeneity (Parasuraman, Zeithaml and Berry, 1985) and perishability (Kasper and Lemmink, 1989) and is therefore difficult to measure. To remedy this difficulty, Parasuraman, Zeithaml and Berry (1985) established the "gap model". Parasuraman, Zeithaml and Berry (1985) conducted focus groups and interviewed executives. In doing so, they identified five "gaps" that can cause quality problems in organizations. The first gap is the consumer expectations-management perceptions gap. This gap resulted from discrepancies between the perceptions of executives and the perceptions of consumers on things like privacy and security issues. Basically, the executives did not understand the customers' expectations. Service firms also experienced problems in providing services as quickly as the customers wanted. This created the second gap, which is called the management perception-service quality specification gap. The third gap is the service quality specifications-service delivery gap. Executives realize that this gap includes the vital role of the contact personnel. This is a

difficult aspect of providing services, because of the inconsistency in the behavior of personnel. The fourth gap is the service delivery-external communications gap. This gap forms, based on the capability of the firm to deliver what is promised and to completely inform consumers of all the things the service firm is doing that benefit customers. Firms should not promise the customer more than the service firm is capable of delivering. These problems in quality created gap five. The fifth gap is the difference between the expectations customers have and the perceptions of service actually received and is pertinent to providing high levels of service quality. That is, gap five is the expected service-perceived service gap. Parasuraman, Zeithaml and Berry (1988) attempted to measure this fifth gap by developing the SERVQUAL instrument. They performed exploratory research to examine quality in four service settings (retail banking, credit cards, securities brokerage, and product repair and maintenance) in order to understand an area that is under researched and difficult to define. These researchers found 10 dimensions (reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer and tangibles) that customers use across varying service industries to form expectations and perceptions of services received.

Research Measurement Tool

Much of the attention focused on the service quality construct is attributable to the SERVQUAL instrument developed by Parasuraman, Zeithaml & Berry (1988) for measuring service quality. Several studies subsequently employed the SERVQUAL to

measure service quality and to assess the validity and reliability of the scale across a wide range of industries and cultural contexts (Carman, 1990; Finn and Lamb, 1991; Gagliano and Hathcote, 1994; Blanchard and Galloway, 1995; Mittal and Lassar, 1996; Zhao, Bai and Hui, 2002; Witkowski & Wolfinbarger, 2002; Wong and Sohal, 2003).

Little is known about service quality perceptions in India (Jain and Gupta, 2004) because research focus has primarily been on developed countries (Herbig and Genestre, 1996). Given the relatively mature markets where the service quality scales have been developed, it seems unlikely that these measures would be applicable to India without adaptation. Angur, Nataraajan and Jahera (1999) examined the SERVQUAL in the retail banking industry and reported a poor fit of the scale to the empirical data. Despite this, several researchers (Sharma and Mehta, 2004; Bhat, 2005) have used the SERVQUAL scale in similar settings with no assessment of the psychometric soundness of the scale.

Cronin and Taylor (1992) were amongst the researchers who leveled maximum criticism on the SERVQUAL scale. They provided empirical evidence across four industries to corroborate the superiority of their 'performance only' instrument over disconfirmation-based on SERVQUAL Scale. In equation form, it can be expressed as:

Equation No.1

$$SQ_i = \sum_{j=1}^k P_{ij}$$

Where - SQ_i = perceived service quality of individual 'i'.

k = Number of attributes / items

P = Perception of individual 'i' with respect to performance of a service firm on attribute 'j'.

The SERVPERF scale is found to be superior not only as the efficient scale but also more efficient in reducing the number of items to be measured by 50 per cent. (Hartline and Ferrell, 1996; Babakus and Boller, 1992; Bolton and Drew, 1991). In the present study, the SERVPERF scale is used to measure service quality in organized Bank.

The early conceptualization of service quality defined that the service quality resulted from a comparison of perceived performance of the service with the expected service (disconfirmation paradigm). Parasuraman et al (1985, 1988) developed a multi-item scale named SERVQUAL for measuring service quality based on disconfirmation paradigm. Cronin and Taylor (1992) advocated a performance-only conceptualization of service quality and they claimed it better than SERVQUAL and they named the scale as SERVPERF. After liberalization of different service industries in India, the issue of service quality has become an important managerial concern.

Purpose of this Study

Although a great number of such research studies take place in the context of developed countries, the similar studies in the context of a rapidly developing country like in India are limited. This focuses on the issue of measuring of service quality in banking sector in India. In line with the above stated purpose, this paper attempts to examine the applicability of two popular measures of service quality in the banking sector in a cross-cultural context. The two most popular multi-item scales of measuring

service quality are SERVQUAL (developed and modified by Parasuraman et al.1985, 1988, 1991,1994) and SERVPERF (a performance-only measure of service quality suggested by Cronin and Taylor, 1992,1994). While measuring service quality through these scales, the dimensionality, reliability and validity of the said scales are checked in Indian context. Also, the correlations of service quality with customer satisfaction, positive word-of-mouth and loyalty are examined.

Research Methodology:

Participants

Data from sample of 293 respondents, who consist of customers of various banks (public sector banks, co-operative banks and private banks) are collected using convenience sampling. No respondents from foreign banks are included as no foreign bank exists in the Kutch district of Gujarat where data was collected. The past similar research used mail survey. However, as the likely response rate of mail survey in India is very poor, personal administration of questionnaire is used in this study. Respondents are mostly contacted at their homes and offices rather than in banks. Most of the respondents refuse to fill up a lengthy a questionnaire in banks when they are in a hurry. In fact, the above sample size is decided based on time and cost constraints as well as cases-to-variables ratio required for multi-variate analysis. Of the 293 respondents, 73.7 per cent were male and 26.3 per cent were female; 16.0 per cent of the respondents were undergraduate, 58 per cent graduate and 25.9 per cent were post-graduate The median age of respondents was 29.5 years. The sample comprises 45.4 per cent service holders,

33.8 per cent businessmen, 9.2 per cent students, 5.5 per cent housewives and rest 6.1 per cent from other categories. The median income of the respondents was about Rs 7500 in a month.

Procedure

To measure service quality, a questionnaire similar to Parasuraman et al. (1991) is developed. The questionnaire contains 22 expectation items, 22 performance items. Expectation and performance items are measured on a seven point scale ranging from “strongly disagree” (1) to strongly agree (7) with verbal labels for scale points 2 through 6. The importance items are measured on a seven point scale ranging “Not at all important (1) to “Extremely important” (7) with verbal labels for scale points 2 through 6. In addition, the questionnaire contained one item each for measuring overall service quality, overall satisfaction, recommendation and loyalty intention. The questionnaire was pretested and revised for minor change in wordings. A portion of the questionnaire is translated into Gujarati language. It is refined through back-translation process.

Analysis and Results

The measurements of service quality according to different measurement instruments are done as follows :

SERVQUAL (Service Quality): [Performance (P)-Expectation (E)]

SERVPERF (Service Quality): Performance (P)

To check the generalization of the five-factor conceptualization of service quality (Parasuraman et al., 1988, 1991 and 1994) all 22 gap scores (P-E) items are factor analyzed with five-factor number imposed on factor extraction method . As used by said researchers, principal axis factoring method was used with oblimin rotation.

Summery of Research Methodology

Table 1: Rotated Factor Pattern Matrix for SERVQUAL items

Type of Research					
Exploratory		Descriptive		Causal	
Research Approach					
Deductive			Inductive		
Qualitative			Quantitative		
Research Strategy					
Experience Study		Secondary Data Analysis		Survey	Pilot Studies
Sample Selection					
Non Probability Convenience Sampling			Probability Sampling		
Classification of Data					
Primary Data			Secondary Data		
Data Collection Method					
Questionnaire	Archival	Interviews	Direct	Participant	Physical
	Records		Observation	Observation	Artifacts
Data Analysis					
Within-Case Analysis			Cross-Case Analysis		

Table 1: Rotated Factor Pattern Matrix for SERVQUAL items

Dimensions	Scale Items ^a	Factors					
		1	2	3	4	5	
T1	Q1	.047	.824	.023	.029	-.036	
T2	Q2	-.039	.886	.063	-.067	-.079	
T3	Q3	.042	.636	-.067	.018	.171	
T4	Q4	-.024	.544	-.166	-.018	.168	
R5	Q5	.097	.277	-.402	-.106	.159	
R6	Q6	.179	.128	-.495	-.206	.035	
R7	Q7	.121	.097	-.514	-.218	.105	
R8	Q8	.265	.076	-.510	-.117	.101	
R9	Q9	.487	.147	-.293	-.053	-.114	
RP10	Q10	.644	-.039	-.162	-.072	.021	
RP11	Q11	.758	.008	-.034	-.045	.008	
RP12	Q12	.858	-.005	.047	.005	.044	
RP13	Q13	.664	.062	.108	-.032	.169	
A14	Q14	.062	.107	-.095	.039	.268	
A15	Q15	.019	.020	-.078	.000	.189	
A16	Q16	.132	.016	.091	-.146	.662	
A17	Q17	.139	.080	.123	-.245	.539	
E18	Q18	.137	-.027	-.011	-.384	.364	
E19	Q19	.139	.135	.136	-.621	-.060	
E20	Q20	.128	-.047	-.083	-.606	.122	
E21	Q21	-.059	-.033	-.084	-.955	-.011	
E22	Q22	.000	.080	-.110	-.648	.111	
Coefficient Alpha		.923	.885	.852	.894	.882	.470

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a Please refer to appendix for description of scale items

Items T1-T4: Tangibles dimensions; R5-R9: Reliability dimension; RP10-RP14: Responsiveness dimension; A15-A17: Assurance dimension; E18-E22: Empathy dimension. Q1-Q22: (P-E) gap scores for 22 SERVQUAL Items

Table 1 shows the factor pattern matrix of SERVQUAL items. Similarly, all responses to 22 performance items are factor analyzed with five-factor number imposed on factor extraction method.

Table2 : Rotated Factor Pattern Matrix for SERVPERF Items

Dimensions	Scale items ^a	Factors				
		1	2	3	4	5
T1	P1	-.046	.832	-.006	.061	-.054
T2	P2	.029	.832	-.110	-.115	.008
T3	P3	.010	.582	-.003	.231	-.140
T4	P4	.180	.485	-.159	.066	-.093
R5	P5	.443	.192	-.189	.136	-.111
R6	P6	.521	.105	-.149	.081	-.210
R7	P7	.484	.004	-.264	.082	-.173
R8	P8	.522	.089	-.131	.112	-.216
R9	P9	.224	.209	-.063	.048	-.401
RP10	P10	.333	.085	-.125	-.035	-.449
RP11	P11	.144	.064	-.090	-.058	-.717
RP12	P12	.047	.075	.035	-.001	-.877
RP13	P13	-.078	.040	-.035	.163	-.756
A14	P14	.144	.158	.055	.359	.059
A15	P15	-.085	.011	-.205	.676	-.211
A16	P16	.016	-.068	-.209	.592	-.265
A17	P17	.047	-.084	-.277	.367	-.356
E18	P18	.188	-.063	-.510	.128	-.181
E19	P19	-.134	.199	-.694	-.057	-.049
E20	P20	.169	.014	-.688	.051	-.027
E21	P21	.023	-.007	-.938	.008	.032
E22	P22	.111	.058	-.712	.093	-.004
Coefficient Alpha		.920	.883	.914	.716	.919

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a Please refer to appendix for description of scale items

Items T1-T4: Tangibles dimensions; R5-R9: Reliability dimension; RP10-RP14: Responsiveness dimension; A15-A17: Assurance dimension; E18-E22: Empathy dimension Also, P1-P22: Performance scores for 22 SERPERF Items

Table 2 shows the factor pattern matrix of SERVPERF (Performance-only) items. The factor pattern matrixes support the five-factor conceptualization of service quality with the exception of one item of reliability loading high with responsive items.

Reliability Analysis:

To examine reliability of the scale dimensions, coefficients alpha are calculated. In addition, coefficients alpha for all 22 scale items for both SERVQUAL and SERVPERF are calculated. These coefficients alpha are shown in the bottom rows of the factor pattern matrixes. All alpha values excepting the value of factor 5 (empathy dimension) of SERVQUAL scale are above the generally agreed upon lower limit for Cronbach's alpha that is .70 (Hair, Anderson, Tatham and Black, 2003).

Predictive Power of Scale

To assess predictive ability of the alternative scales of service quality, responses to 22 scale items (Expectation-minus-Performance scores for SERVQUAL and Performance-only scores for SERVPERF) are regressed with the directly measured "overall service quality". The explained variation of overall service quality by two alternative scale are shown in Table 3.

Table.3 Variation in Overall Service Quality Explained by SERVQUAL and SERVPERF Scale Items

Scale Items ^a	R ²	Adjusted R ²	F statistic	Significance Level
22 SERVQUAL items	.434	.388	9.422	.000
22 SERVPERF items	.572	.537	16.394	.000

Note: Dependent Variable Overall Service Quality; Independent Variables- 22 Scale Items. Please refer to appendix for description of scale items SERVPERF appears to explain more variance in overall service quality than SERVQUAL.

Validity of Scale

To examine the validity of the alternative scales, the two most widely accepted forms of validity- convergent and discriminant validity are measured. The convergent validity assesses the degree to which two measures of the same concept are correlated. Convergent validity can be assessed by looking at the average correlations between alternative measures of service quality and the directly measured overall service quality (Hair et al., 2003).

Table 4: Pearson correlation coefficients

	SERVQUAL	SERVPERF	Overall Quality	Satisfaction	Positive WOM	Loyalty
SERVQUAL	1	.823	.581	.532	.506	.463
SERVPERF		1	.700	.684	.687	.636
Overall Quality			1	.842	.793	.736
Satisfaction				1	.825	.807
Positive WOM					1	.871
Loyalty						1

Looking at the correlation coefficients in Table 4, it is found the average pair wise correlations among SERVQUAL, SERVPERF and overall service quality is 0.701 (average of 0.823, 0.700 and 0.581). High correlations indicate the scales are measuring the intended concept of service quality. The empirical test for discriminant validity is again the correlations among measures, but this time the service quality scales are correlated with a similar but conceptually distinct measure. Now the correlation should be low. Here, the correlations of alternative measures of service quality with variables such as "satisfaction", "recommendation" and "loyalty" should be lower than

correlation between the two alternative measures of service quality. A look at Table 4 indicates that the average pair wise correlation of SERVQUAL with the other variables of the research is 0.500 (average of 0.532, 0.506 and 0.463) whereas for SERVPERF it is 0.669 (average of 0.684, 0.687 and 0.636). The above correlations (0.500 and 0.669) are lower than the pair wise correlations between the alternative scales of service quality (0.823).

SERVQUAL versus SERVPERF

Table 5 shows the mean performance-minus-expectation (SERVQUAL) gap scores and mean performance-only (SERVPERF) scores.

Table 5: Mean performance and performance-minus-expectation scores

Service quality dimensions	SERVQUAL Mean P- E	SERVPERF Mean P
Tangibles	-0.83	5.24
Reliability	-.84	5.26
Responsiveness	-0.76	5.32
Assurance	-0.65	5.45
Empathy	-0.79	5.22

Note: Both expectation (E) and performance (P) scores are measured on a seven-point scale

From a diagnostic standpoint, SERVPERF shows empathy dimension needs more resources as it is having lowest performance score (P). However, SERVQUAL shows the greatest gap occurs in reliability dimension, which requires more resources. It is a matter of debate which conclusion is theoretically sound.

Conclusion

This paper shows that both SERVQUAL and SERVPERF are valid and reliable in banking

industry in India. However, the result of this study cannot be accepted as being completely relevant and applicable to all banks who offer a mix of services, because of the limited sample size, the sampling procedure and particularly its focus on banks in Gujarat. In addition, it is shown that service quality has positive and significant correlation with customer satisfaction, positive word of mouth and loyalty intention.

Bank system must be responsive to the need of the customer. Bank systems such as in-house cash withdrawal facilities, payment of utility bills, safe customer parking are essential ingredients of enhance service quality and customer satisfaction. The role of technology should not be underestimated. New technology and interactive marketing can create new opportunities for bank. Bank can use technology to simplify and improve the service offered to customers.

This study undertaken within the bank, adds to the growing literature, which calls for the re-examination of how to measure and manage service quality.

Directions for Future Research

The interpersonal category (human element) recorded a number of incidents in the focus group interviews stated earlier. There would be value in additional work to analyze these incidents further to try to establish a more detail perspective on key influencing factors impacting on service quality perceptions in Banking. Previous research (Zeithmal, 1988; Sproles, 1977; Stafford & Enis, 1969; Injazz et al., 1994; Yoon & Kijewski, 1997) states that the relationship between quality and price appears to be product specific and generally weak. Should bank continue to emphasis low price in their competitive strategies or should they accept the risk of asking to pay a premium for enhanced services?

The development and testing of the bank service quality instrument has implications for other good banks as well. Based on this study and other studies cited, it appears that and that future research on Service Quality should involve the development of industry specific measure of service quality.

While this research provides some important insights into service quality in organized Banking, there is still an opportunity to extend these findings to gain a more comprehensive understanding of organized banking. The future research may highlight the service quality in Banking in total, comparative analysis on SERVQUAL and SERVPERF scores in different kinds of bank, market segment and formats in banking industry.

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Appendix:

Scale Items:

- V1. Bank having modern-looking equipment
- V2. Visually attractive physical facilities
- V3. Bank employees' dress and neatness in appearance
- V4. Visually attractive materials (statements or passbook) associated with bank's service
- V5. When something is promised by a certain time doing it
- V6. When there is a problem, showing sincere interest in solving it
- V7. Performing the service right first time
- V8. Providing the service by the time promised
- V9. Accurate/error-free record keeping
- V10. Telling the customer exactly when the service will be performed

V11.Receiving prompt service

V12.Employees who are always willing to help customers

V13. Employees who are always ready to respond to customer requests

V14. Employees who instill confidence in customers

V15.The feeling that you are safe when conducting transactions with the bank's employees

V16. Employees who are always courteous/polite

V17. Employees having knowledge to answer customer's question

V18. Employees who give individual attention to customers

V19. Operating hours convenient to all customers

V20. Employees who give personal attention to customers

V21.A bank which has your best interests at heart

V22. Employees who understand the specific needs of their customers

1	2	3	4	5	6	7
Very unsatisfied	unsatisfied	Slightly unsatisfied	Neutral	Slightly satisfied	satisfied	Very satisfied

3 I would recommend the bank to my friends and relatives (Circle the number that best describes your feelings) Very Low probability 1---2---3---4---5---6---7 Very High probability

4 In future, I will remain loyal with the bank. (Circle the number that best describes your feelings) Very Low probability 1---2---3---4---5---6---7 Very High probability

Other measures:

1 The overall service quality of the said bank is (circle the number that best describes your feelings)

1	2	3	4	5	6	7
Very poor	Poor	Slightly poor	Average	Slightly good	Good	Very good

2 Your overall satisfaction with the said bank (circle the number that best describes your feelings)

Velocity of money function for India: Analysis and Interpretations

Gaurang Rami

ABSTRACT

Velocity of Money, i.e. the ratio of nominal income to the stock of money, is the spread at which the money changes hand in a given financial year. Keynesian and Quantity theories are two competing explanations of the aggregate money demand. The monetarists think that the stability of income velocity of money (V) is important, whereas Keynesian have criticized the notion of stability of velocity of money. Monetarists believe that velocity of money is relatively stable and changes therein are highly predictable. Neo-Keynesians are less confident and argue that either contention is an exaggeration. In this paper the velocity of money function was estimated using annual data for broad money velocity (V3) for the Indian economy covering time period from 1972-2004. Various combinations of the explanatory variables were tried, each with and without the lagged dependent variables. It was found that (i) velocity of broad money [V3] in India turns out to be highly predictable, which corroborates monetarist proposition. Prior knowledge of a set of explanatory variables such as real income, interest rate, the spread of commercial bank branch-network, and past monetary expansions together can explain more than 98 percent of the variation in velocity of broad money (ii) a comparison of the estimated velocity functions, with and without the 'institutional' variables suggests that

inclusion of the 'institutional' variables improves the statistical properties of the fit i.e. 2 and Durbin Watson [DW] statistic. This implies that the long run real income elasticity of money demand is significantly reduced when 'institutional' variables are added to the array of the conventional explanatory variables such as real income and interest rate. However, out of the two institutional variables considered, 'population per bank office' is found to be highly significant in all the cases, while the other institutional variable measuring the 'degree of monetization' is not found to be significant.

JEL classification : C32, C87, E51

Key words : Velocity of money, Autocorrelation, Quantity Theory of Money [QTM], India

INTRODUCTION

Velocity of money, i.e., the ratio of nominal income to the stock of money, lies at the heart of the relationship between money, income and price. Any given stock of money corresponds to a whole range of potential spending levels depending upon the magnitude of velocity of money. In view of this, velocity of money assumes crucial importance in monetary policy formulation. Monetary contraction aimed at containing inflationary pressure is not likely to succeed if the concretionary impulse is neutralized by a simultaneous rise in the velocity of money.

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The ratio of the level of aggregate expenditure at current market prices in the economy to the average money stock in a given year is known as the 'velocity circulation of money'. In other words, it is the speed at which the money changes hands in a given financial year. When a country's GDP grows at a faster rate than the rate of increase in the money supply, the velocity of money increases and vice-versa. The concept of money velocity evolved with the equation,

$$MV=PT \quad (1)$$

Where, **M** is total quantity of money in circulation, **V** stands for the velocity of money, **P** refers to the general price level and **T** is the total volume of transactions of goods and services against money. Due to the problem of non availability of data, the term **T** was later replaced by **Q**, so the equation becomes,

$$MV=PQ \quad (2)$$

Q is assumed to be full employment level and **V** is an institutional constant, a direct relationship between exogenously given money supply (**M**) and price level (**P**) is postulated.

The above equation has been named as 'Cambridge cash balance equation' and is given as,

$$M = k PQ \quad (3)$$

where **k** = $1/V$ is the proportion of the total value of monetary transaction that public choose to hold in cash balances and which also determines the necessary amount required for given **P** and **Q**.

where **k** = $1/V$ is the proportion of the total value of monetary transaction that public choose to hold in cash balances and which also determines the necessary amount required for given **P** and **Q**.

Keynesian and quantity theories are two competing explanations of the aggregate demand for money. The monetarists think that the stability of velocity of money (**V**) is important, whereas Keynesians have criticized

the notion of stability of velocity of money. According to Keynes, under the condition of unemployment equilibrium **V** is highly unstable. The Quantity Theory of Money (**QTM**) is often associated with the assumption of a constant **V** that is something as a natural constant. This is not entirely correct. No doubt, the transaction approach emphasizes payment practice such as the frequency with which people are being paid. The irregularity of receipts and payments is its key determinant. But Fisher and earlier quantity theorists did explicitly recognize that velocity would also be affected by the other factors such as the high rate of interest and also the rate of change in prices. They recognized that both the high rate of interest and rapid rising of prices would induce people to economize on money balances and so tend to raise velocity and that low interest rate and falling prices would have the opposite effect. Therefore it was thought to be a good first approximation to assume that **V** was almost a constant (Gupta SB, 1999; p.202)

The relationship between money, price and income is the cynosure of monetary theory and policy alike. Analytically, what lies at the heart of this relationship is the velocity of money, i.e., the ratio of nominal income to the stock of money.

The widely accepted positive correspondence between monetary expansion and inflation is sometimes challenges as being counterfactual. The classic example in this regard is the US economy around the Great depression. During the 1930s, the narrow money stock in the US expanded by about 35 percent and yet consumer prices actually fell by as much as 20 percent. The missing link in this riddle was the velocity of money.

It is widely accepted that research effort in this regard took a quantum leap with the recent seminal work by Bordo and Jonung (1987). Their work offers a comprehensive explanation of the long term or secular behaviour of velocity of money, building as it does on the

'institutional approach' proposed by Wicksell way back in the 1930s. Bordo and Jonung study covers as many as 84 countries, but detailed countrywise investigation is confined to only five industrialized countries, namely, US, Canada, UK, Sweden and Norway.

As far as concern of stability in the velocity of money the empirical studies related to developed economies have demonstrated that velocity of money is neither perfectly stable nor fully predictable. On the other hand, its movements also do not appear to be random or perverse. If the monetary authorities could discover the underlying factors responsible for fluctuation in velocity of money, a meaningful monetary policy is possible even with a moving target. It is with this perspective that most empirical studies appear to have concentrated on locating the 'proximate determinants' of velocity of money.

The early explanations for the secular behaviour of velocity of money were couched typically in term of the parameters of the conventional money demand functions. Understandably so because, analytically, velocity of money is nothing but reciprocal of demand for money expressed as a ratio of income. This important analytical inter-linkage may be illustrated as follows:

Consider a conventional money demand function

$$\log \frac{M}{P} = \log(YR) - (R) \quad (4)$$

where $\frac{M}{P}$ = real money balance

YR = real income (scale variable)

R = Interest rate (opportunity cost variable)

and, parameters and are positive by construction. Velocity of money (V), by definition is

$$V = \frac{YR * P}{M} = \frac{YR}{(M/P)} \quad (5)$$

Which is nothing but a reciprocal of demand for money expressed as a ratio of income.

$$\text{also, } \log V = \log YR - \log \frac{M}{P} \quad (6)$$

which implies that

- 1) if the real income elasticity of the money demand $\hat{\alpha}$ exceeds unity, the real income elasticity of velocity is negative; and
- 2) if the interest elasticity of the money demand $\bar{\alpha}$ is negative, the corresponding elasticity of velocity of money is positive.

(II) REVIEW OF LITERATURE

The studies on velocity in the Indian context may be classified into three broad groups; those which are descriptive in character, explanatory and those which attempt to investigate the stochastic properties of velocity behaviour.

In the descriptive category one of the attempts was made by Iyer (1970), which observed a declining trend in velocity of both narrow as well as broad money during the period 1955 through 1969. Saravane (1971), followed a sectoral approach in analyzing money demand as well as velocity of money and pointed out that the velocity of money for the household sector ranges between 5.44 and 6.91 during 1950-51 to 1962-63 with marginal year to year fluctuations. Vasudevan (1975) found that velocity of money displayed characteristics of instability during 1951-52 to 1973-74.

The search for a suitable econometric function for velocity of money in India began, probably, with Venkatachalam and Anjaneyulu (1970). Curiously, the so-called 'institutional factors' have always been incorporated in such efforts in the Indian context, in some form or the other. The Venkatachalam-Anjaneyulu study used time trend (as a proxy for monetization rate)

besides the usual explanatory variables such as income and interest rate found in the conventional formulations of money demand function.

Kamaiah and Paul (1979) attempted to fit a velocity function for India using annual data up to the year 1974-75 based on the conventional variables, such as, real income, interest rates and price expectations. Unsatisfactory empirical results, however, led them to conclude that, 'velocity, being a ratio, could behave in a complex way that few specified determinants might not explain fully its movements'. Accordingly they suggested that velocity behaviour should be modeled using time-series methods rather than econometric model.

Against the backdrop of the overall research effort regarding velocity behaviour in the industrial countries, it is evident that corresponding studies in the Indian context leave a considerable scope for further research that could improve the general understanding of velocity behaviour in India. In this regard two specific areas stand out:

(1) Stochastic properties of velocity behaviour have been analysed using quarterly data during 1970-71 to 1981-82. This could be readily extended to cover more eventful later period of the 1980s.

(2) Predictability of velocity of money does not seem to have been adequately explored. Indeed, a rough and ready velocity function based on certain specific determinants is still not available as a guide to policy formulation. In this regard, the role of money as emphasized by Bordo and Jonung (1987) study needs to be explored further.

Singh, Shetty and Venkatachalam (1982) pointed out that the velocity of narrow money displayed a sharper decline after 1975-76 than that warranted by secular increase in monetization of the economy. They attributed the phenomenon to the suddenness in the

emergence of inward remittances (during the second half of 1970s) leading to large accumulations of money balances on account of the decision delays by the wealth holders.

Subsequently, Kamiah, Paul et al. (1987) used Autoregressive Integrated Moving Average [ARIMA] method on quarterly data for the period 1970-71 to 1981-82 to reveal that velocity behaviour of narrow money does not appear to follow the random walk hypothesis. In their view, this finding lends support to the monetarist argument that velocity can be a behavioural function and hence, changes in the stock of money lead to predictable changes in the nominal income.

Chakrabarty and Varghese (1989) attempted to estimate velocity of narrow and broad money for the period 1950-51 to 1984-85, incorporating the explanatory variables typically used in money demand functions (such as income, interest rates and inflation rates) along with an 'institutional variable' the number of bank offices. Their results are generally unsatisfactory, estimated coefficients for explanatory variables are not statistically significant.

Jadhav Narendra (1994) talks about different factors that affect the velocity of money in case of India. He estimated the velocity function using seasonally adjusted quarterly velocity series for broad money (V3) covering the period 1970-II to 1988-I. He considered the explanatory variables like the real income, the spread of banking, interest rates, and the degree of financial sophistication achieved in the economy. With these variables he has done the regression analysis and found that these factors explain 90 percent variation in the velocity of broad money in the Indian economy.

The study of Omkarnath G and Parida Srutikantha (2006) is motivated by the decline in the velocity of money, which is present in the Indian economy. They have used annual data from 1950-51 to 2001-02. The major objective of the study was to trace the trend of income

velocity of money and to explain the factors that are responsible for the decline in the velocity of money. Except these, one of the objectives was to find out whether there is any impact on the growth of the financial sector due to the decline of velocity of money. They have discussed about the velocity of both the money supply M1 and M3 i.e. the narrow money and broad money. They started with the Keynesian's view, who thought that the velocity of money is a variable as opposed to the Monetarists who argued that it is institutional constant. Thus, the main objective was to analyze the behaviour of velocity of money in India. They have also compared the velocity of developing, developed and underdeveloped countries to show that the velocity of money is declining in India. There was also an attempt to find out trend of income velocity of money and the factors which are responsible for its declining trend in India. They found that in India the money supply is growing faster than the GDP. The study examines the two types of income velocity i.e. the narrow and the broad income velocity of money, and conclude that the income velocity of broad money is declining faster than the narrow income velocity of money. This is due to certain change in the economy like change in banking sector, the ratios of the Currency to Aggregate Deposit, aggregate deposit to that of broad money and the ratio of time deposit in the total deposit. In the case of M3, income velocity has been declining from the beginning of 1970-71. It has declined to 1.40 from 4.34. To show the fall in the income velocity of money they used the first log difference to know the larger shocks. From this analysis it is clear that the income velocity of M3 is declining faster and more steadily than that of the income velocity of M1.

(III) VELOCITY FUNCTION FOR INDIA

In a study cited earlier in the review of literature while analysing the predictability of velocity, the Bordo and Jonung study (1987) finds itself in a bind as it turns out that in all the five countries examined (i.e. US, UK, Canada,

Sweden, and Norway), velocity behaviour exhibits a random walk. This phenomenon implies that past changes in velocity alone cannot be used to predict future changes. Notwithstanding this setback, however, the study demonstrates that inclusion of a set of explanatory variables in the velocity function such as income, interest rate, etc., (which are generally used in the conventional demand function for money) as well as some 'institutional' variables, significantly improves predictability of velocity.

Bordo and Jonung study suggests three sets of 'institutional' factors:

- (i) degree of monetization
- (ii) degree of financial sophistication and,
- (iii) degree of economic stability

The monetization process entails progressive widening of the use of money in the economy and as such, may be expected to exert a negative influence on the velocity of money. The process is likely to be reflected in structural shifts in production structure in favour of the non-agricultural sector. Moreover, it would be fostered by the spread of commercial banking in the economy. Accordingly, the degree of monetization in an economy may be said to have been enhanced if:

- (i) the share of labour in the non-agricultural sector moves up or
- (ii) the urbanization ratio increases, or
- (iii) the currency-money ratio falls, or
- (iv) the population per bank office declines

On the other hand, velocity of money may be expected to rise in response to sophistication of the financial system on account of availability of money substitutes as well as greater economy in the use of money. The ratio of non bank financial assets to the total financial assets is often used as proxy measure for the degree of financial sophistication. It therefore follows

that this ratio would enter the velocity function with a positive sign.

Likewise, improved economic stability may be expected to raise the velocity of money due to lower precautionary demand for money. The degree of economic stability could be proxy, for example by the variability of real income growth or by the share of government expenditure in national income.

In the Indian context, for much of the post bank nationalization after 1969; monetization spurred by rapid commercial bank branch expansion and financial sophistication as reflected in the rate of money substitutes relative to money appears to be the dominant characteristic of the evolution of the Indian financial system. Accordingly, attention has been focused on the two 'institutional' variables: population per bank office and share of monetary assets in gross household saving in financial assets. Since, a decline in population per bank office implies greater spread of banking and hence higher degree of monetization which is expected to be correlated negatively with velocity of money, this variable should enter the velocity function with a positive sign. On the other hand, a fall in the share of monetary assets in gross household saving in financial assets signifies greater financial sophistication which is believed to be positively correlated with velocity of money, and hence, the coefficient corresponding to this variable is expected to be negative.

These 'institutional' variables were combined with the conventional explanatory variables such as real income and interest rates to formulate an expanded velocity function. Additionally, as a test of the monetarist hypothesis that velocity movement can be predicted by past accelerations in money growth (Taylor 1976, Friedman and Schwartz 1982), lagged monetary growth was used as an explanatory variable. The generalized velocity function thus takes the form:

$$\log V = (\log YR) + (R) + (PBO) + \frac{MA}{GHSF} + (\log M)_{-1} \quad (7)$$

YR = Real Income (scale variable)

SIR = Short term Interest Rate (opportunity cost variable)

PBO = Population per Bank Office

MA ----- = Share of monetary assets
(i.e. currency and bank deposits)

GHSF = in gross household saving in all financial assets[#]

M = Stock of Money
(M1 for Narrow money, M3 for Broad money)

[#]While estimating velocity function, the ratio of demand deposit to gross household saving in financial assets (**DD/GHSF**) was used.

The velocity function was estimated using annual data for broad money of velocity covering the period from 1972 to 2004. Various combinations of the explanatory variables were tried, each with and without the lagged dependent variables. The estimated results are summarized in Table 5

(IV) TRENDS IN VELOCITY OF MONEY IN INDIA

In India, two measures of money supply are largely used; Narrow Money (M1) and Broad Money (M3). Accordingly, two separate measures of income velocity of money could be defined, i.e. Velocity of Narrow Money (V1) and Velocity of Broad Money (V3). Data on these two measures of velocity covering the period 1950-51 to 2004-05 based on income measured by GDP at factor cost (current price) and Narrow Money (M1) and Broad Money (M3) are taken from the Handbook of Statistics on the Indian Economy (2006), Reserve Bank of India, Mumbai.

For the purpose of analyzing the trend in velocity of money in India, we have subdivided the entire time period under study viz. 1950-51 to 2004-04 into 5 sub period under study viz. 1950-1960, 1961-1970, 1971-1980, 1981-1990 and

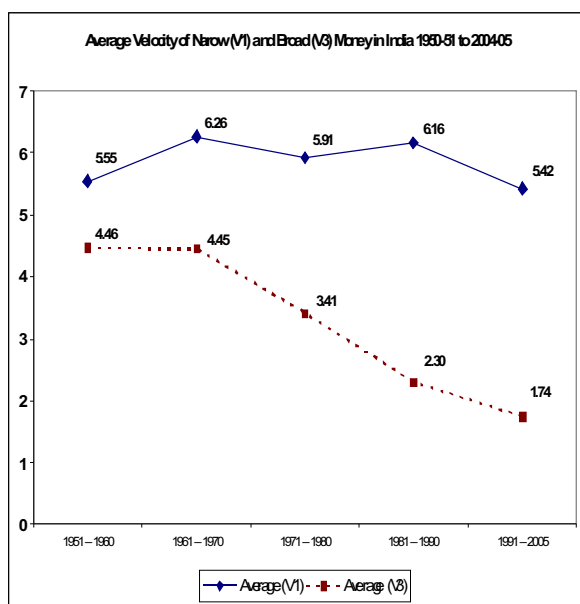
1991-2005. For each sub period as well as for the entire period the Average Velocity of Narrow Money (V1), the Average Velocity of Broad Money (V3) and their variability as measured by the Coefficient of Variation (CV) are presented in Table 1 and the same values are depicted in graph in Figure 1 given below:

Table 1 : Trends in Velocity of Money in Indian Economy: [1950-51 to 2004-05]

Year	Narrow Money		Broad Money		Gap between V1 and V3
	Average	Variability	Average	Variability	
Period	(V1)	@	(V3)	@	
1951-1960	5.55050	06090	4.46070	06777	1.089
1961-1970	6.25890	05295	4.44990	05008	1.809
1971-1980	5.91490	04519	3.40880	15036	2.506
1981-1990	6.16040	03513	2.29670	08848	3.863
1991-2005	5.42340	06000	1.74210	15018	3.681
		Overall Time Period			
1951-2005	5.82180	07690	3.13260	38047	2.689

@Variability as measured by Coefficient of Variation (C.V)

Figure 1 - Trends of Average Velocity of Narrow Money (V1) and Broad Money (V3) in India during 1950-51 to 2004-05



It can be seen from Table 1 above that the Average Velocity of narrow money (V1) was 5.55 during 1951-1960. During 1961-1970 it increased to 6.25 and during 1971-80 it came down to 5.91 and again increased to 6.16 during 1981-1990. After the adoption of the new economic policy (1991-2005) the average velocity of narrow money is reduced to 5.42. But on the other hand the Average velocity of broad money (V3) showed an over all steady fall for the period. It was 4.46 during 1951-1960 and 3.40 during 1971-1980. Then it came down to 2.29 during 1981-1990 and to 1.74 in 1991-2005. As we have seen earlier the average velocity of narrow money showed a fluctuating trend.

Thus, it may be concluded that

- (1) The velocity of broad money is consistently lower than that of narrow money, the gap between the two however, seems to have widened over a period of time (from 1.089 during 1951-1960 to 3.681 during 1991-2005).
- (2) The relative variation in velocity of broad money is consistently higher than that of narrow money, as is evident from the computed values of the relevant coefficients of variation (C.V.). This is mainly because of the heterogeneous composition of broad money relative to narrow money.

The fall in the income velocity occurs due to the faster growth of the money supply as compared to the growth of the GDP at current market prices. The broad money supply M3 is moving faster than the GDP. The fall in the income velocity of broad money is due to the faster growth of broad money in comparison to that of the narrow money in the economy (Omkarnath G and Parida Srutikantha, 2006, p.53).

Now, we try to determine the trends in the growth rates of GDP at current market price, Narrow Money Supply (M1) and Broad Money Supply (M3) during the entire period of study i.e. 1950-51 to 2004-05 as well as during the sub

periods mentioned earlier.

The results are presented in Table 2 and their diagrammatic presentations is given in Figure 2

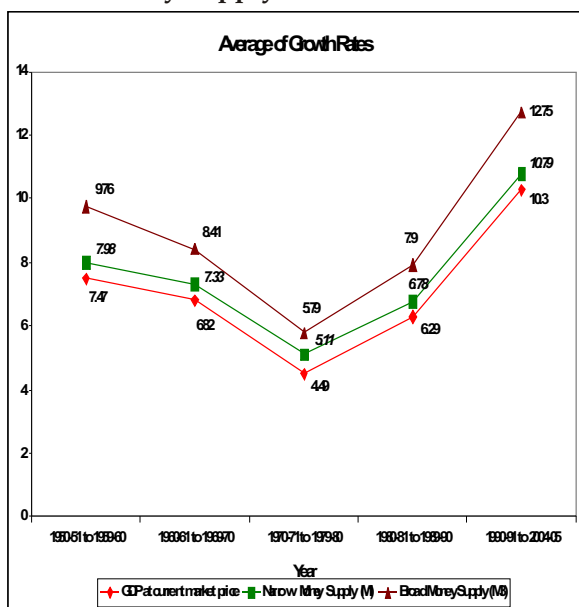
Table 2 - Average of Growth Rates of GDP at Current Market Price, Narrow Money Supply (M1), Broad Money Supply (M3)

Period	GDP at Current Market Price	Narrow Money Supply (M ₁)	Broad Money Supply (M ₃)
1950-51 to 1959-60	7.47	7.98	9.76
1960-61 to 1969-70	6.82	7.33	8.41
1970-71 to 1979-80	4.49	5.11	5.79
1980-81 to 1989-90	6.29	6.78	7.90
1990-91 to 2004-05	10.30	10.79	12.75

Source: National Account Statistics (2002-03), Reserve Bank of India, Handbook of Statistics of Indian Economy, Reserve Bank of India, Mumbai

Figure 2

Average of Growth Rates of GDP at Current Market Price, Narrow Money Supply (M1), Broad Money Supply (M3)



Here, the data represent the average growth rates of GDP and Money supply, which show that the money supply grew at a much faster than the GDP. Also, the broad money supply (M3) grew faster than the narrow money supply (M1).

Note: A comparison of Velocity of Narrow Money (V1) and Broad Money (V3) is not strictly admissible after the 1978-79 due to a structural break in the Narrow Money (M1) series.

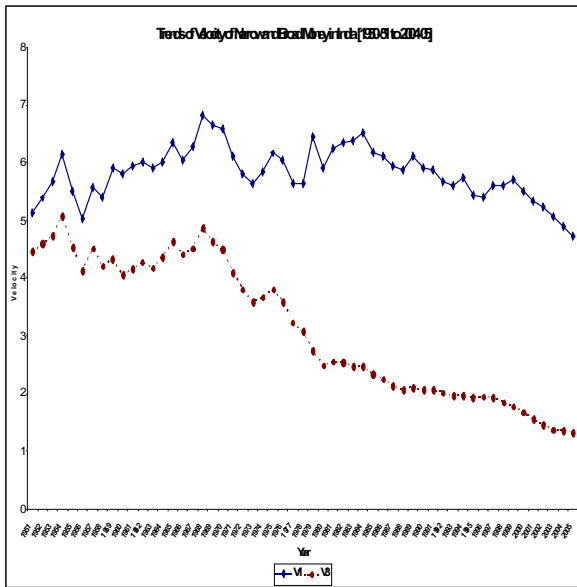
In accordance with the recommendations of the RBI's Report: Second Working Group on Money Supply (1977), the part of saving deposits which was permitted to be withdrawn without notice was lumped with demand deposits. As a result of this criterion (which was in force from 1961 to 1977), an overwhelmingly large part of saving deposits (about 85 percent) was clubbed with demand deposit. With effect from March 1, 1978, however, the accounting procedure was changed drastically. According to the new procedure (which is applicable to data), that portion of saving deposits on which interest is actually paid is treated as time deposits, while the residual is deemed to be demand deposit. As a result of this change the earlier patterns of bifurcation is reversed, in that nearly 85 percent of saving deposit are now treated as time deposit.

It is clear, therefore, that the long term-time series of demand and time deposit have been subjected to major structural shifts in 1978. The study, however, does not show adequate awareness of this phenomenon. As a result, the data series for demand and time deposits as well as econometric result derived from them are questionable.

TREND EQUATION

Before actually fitting the trend equation to the Velocity of Broad Money (V3), we have depicted the values of Narrow Money and Broad Money velocity (V1 and V3 respectively) in the Figure 3

Figure 3 - Trends of Velocity of Narrow (V1) and Broad Money (V3) in India [1950-51 to 2004-05]



A trend equation for velocity was fitted to examine the stochastic properties of the velocity function.

Using the relevant annual data from 1950-51 to 2004-05, the following trend equation for Velocity of Broad Money (V3) is estimated:

Table 3: Trend equation for Velocity of Broad Money (V3)

Dependent variable: LOGV3

Variable	Coefficient	Std. Error	t-statistic	p-value	Significance level
constant	1.75638	0.03181	55.2146	<0.00001	**
time	-0.0247789	0.00098829	-25.0725	<0.00001	**

** significant at 1 percent level Adjusted R2 = 0.920778

Durbin-Watson (DW) statistic = 0.183029

1) The value of adjusted R2 is very high (0.92) indicating that there is a strong linear time trend as far as V3 in India is concerned.

2) As the coefficient of time is negative and statistically significant at 1 percent level, a negative trend is suggested.

3) Also the Durbin Watson test suggests presence of positive autocorrelation which is common for time series data

As in the case of V3, for the Velocity of Narrow Money (V1) also a trend equation was fitted. Table 4 below gives the details

Table 4:

Trend equation for Velocity of Narrow Money (V1)

Dependent variable: LOGV1

Variable	Coefficient	Std. Error	t-statistic	p-value	Significance level
constant	1.79468	0.0207276	86.5843	<0.00001	**
time	-0.00128657	0.000643975	-1.9979	0.05088	*

* Significant at 5 percent level

** Significant at 1 percent level

Adjusted R2 = 0.0524888

Durbin-Watson statistic = 0.431176

Here value of adjusted R2 is quite low (0.0524) and also the coefficient of time variable is statistically significant at 5 percent level implying that there is no linear trend in V1 values. So for further analysis, we have considered the velocity of broad money only (i.e. V3)

Table 5: Velocity of Broad Money (V3) function for India Economy (1972 to 2004)

Eq. No	Dependent	Constant	Log (YR) ₋₁	SIR	PBO	PBO ₋₁	DD / GHSF	DD / GHSF ₋₁	LOGM ₃₋₁	LOGV ₃₋₁	R ²	D.W.	Remark
1	LOGV ₃	1.7340 (3.9218) **	-0.1967 (-4.5502) **	0.0188 (4.4770) **	0.00001 (4.4164) **	-	-0.0032 (-0.3153)	-	-	0.5192 (4.7634) **	0.989	2.084	A
2	LOGV ₃	1.7155 (3.7452) **	-0.1926 (-4.3261) **	0.0190 (4.3465) **	-	0.0000091 (4.1450) **	-0.0030 (-0.2924)	-	-	0.5069 (4.327) **	0.988	2.102	A
3	LOGV ₃	1.9234 (4.0848) **	-0.2094 (-4.5851) **	0.0188 (4.6184) **	-	0.0000095 (4.3520) **	-	-0.0113 (-1.0952)	-	0.4681 (3.9608) **	0.989	2.080	A
4	LOGV ₃	2.1793 (3.4746) **	-0.2909 (-2.1099) **	0.0178 (4.0303) **	-	0.0000101 (4.1181) **	-	-0.0120 (-1.1405)	0.0357 (0.6277)	0.4957 (3.8886) **	0.989	2.029	A
5	LOGV ₃	3.6745 (18.120) **	-0.3807 (-20.836) **	0.0240 (5.0065) **	-	0.0000167 (11.9948) **	-	-0.0269 (-2.2541) *	-	-	0.983	1.50	IC

* Significant at 5 percent level A: Absence of Autocorrelation
 Figures in parenthesis are t-values

** Significant at 1 percent level P: Presence of Autocorrelation

IC: Inconclusive

Note: Regression results have been estimated using Gretl software [for further detail visit <http://gretl.sourceforge.net/>]

LOGV3 = Logarithmic Velocity for broad money Log (YR)-1 = Logarithmic Real Income with one year lag, SIR = Short term Interest Rate,

PBO = Population per Bank Office, PBO-1 = Population per Bank Office with one year lag, DD/GHSF = Demand Deposit/Gross Household Saving in Financial assets DD/GHSF-1 = Demand Deposit/Gross Household Saving in Financial assets with one year lag, LOGM3-1 = Logarithmic Broad Money with one year lag LOGV3-1 = Logarithmic Velocity for broad money with one year lag

(V) VELOCITY OF BROAD MONEY FUNCTIONS FOR INDIA

Analysis and Interpretation [Table 5]

(1) Velocity of broad money [V3] in India turns out to be highly predictable, which corroborates monetarist proposition. Prior knowledge of a set of explanatory variables such as real income, interest rate, the spread of commercial bank branch-network, and past monetary expansions together can explain more than 98 percent of the variation in velocity of broad money.

(2) A comparison of the estimated velocity functions, with and without the 'institutional' variables suggests that inclusion of the 'institutional' variables improves the statistical properties of the fit i.e. 2 and DW statistic. This

implies that the long run real income elasticity of money demand is significantly reduced when 'institutional' variables are added to the array of the conventional explanatory variables such as real income and interest rate. However, out of the two institutional variables considered, 'population per bank office' is found to be highly significant in all the cases, while the other institutional measuring degree of monetization is not found to be significant.

(3) The implied long-run (nominal) interest semi-elasticity of velocity is of the order 0.02 and it does not seem to be sensitive to the presence of 'institutional' factors as an additional explanatory variable.

(4) Degree of monetisation as measured by Demand Deposit divided by Gross House hold saving in all Financial Asset [DD/GHSF] is not significant in any of the models, except in one case, where it is significant at 5% level only.

(5) Population per Bank Office [PBO] is another institutional factor, which is statistically significant in all the models.

(6) Autocorrelation is found to be absent in all the cases, except in equation (5) where the Durbin Watson (DW) test is found to be inconclusive

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Perceptions of various stakeholders on financing of Indian higher education: A case study of Gandhidham Taluka

Kinjal Ahir

ABSTRACT

The growth theories now more empathetically consider the role played by higher education institutes in contributing towards the development of an economy's growth. Thus the demand for an increased access to higher education is becoming more pressing on the governments. Governments are themselves under growing pressures in fulfilling their role in providing other more prioritized public goods, especially in developing nations. Thus under such circumstances, a growing need is to explore various options available in financing the growing needs of higher education, and India is no exception. This research, through a case study of Gandhidham Taluka of Gujarat, is an attempt to know the perceptions of various stakeholders in higher education, namely parents, students, faculties, principals, etc. regarding their opinions on financing of Indian higher education, thereby exploring some new avenues as sources of funding.

KEY WORDS :

private higher education, financing, stakeholders

ABBREVIATIONS USED:

1. Higher Education Institutes (HEI)
2. Private Aided Colleges (PAC)
3. Private Unaided Colleges (PUC)

INTRODUCTION

The higher education attainment of a nation's people contributes strongly to its economic growth and development as theoretically and empirically proved by Schultz (1961; 1963), Denison (1962; 1967), and Krueger (1968). No nation in today's race for development can thus afford to compromise in the provision of higher education for its citizenry especially considering the fact that the economic growth is knowledge-driven. Most of the developing countries face similar challenges when it comes to provision of higher education like shortage of public resources and competing claims on limited resources from other social and economic challenges (like removal of poverty, health and sanitation and basic education). Adding fuel to the fire are the rising costs of higher education that makes the provision by the government even more stressful. Rising social and private demands for higher education (brought about by both rising population and a growing private need to pursue higher education for the upward mobility on the economic ladder) further requires more access to higher education.

India is neither an exception. In 1950-51 the higher education enrolment rate was 0.7%, which increased to 1.4% in 1960-61. For 2003-04 the Gross Enrolment Ratio in higher education works out to be 9% according to the Selected Education Statistics (CABE committee 2005). There has been a rapid expansion in higher

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education with student enrollment growing at about 5% annually over the past two decades. This growth is about two-and-half times the population growth rate and results from both a population bulge in lower age cohorts as well as increased demand for higher education (Kapur and Mehta, 2004). Thus, in terms of enrolment India is the third largest higher education system in the world after China and the USA. In contrast as for the government financing since 1991-92 to 2003-04, not even once has the share for Higher Education as a percentage of GDP touched 0.5% mark of which state bears the burden of almost 80% as compared to the Centre (CABE committee 2005). In absolute terms even though the government expenditure has increased, yet the expenditure per student spent by the government has declined rapidly over the years (Agarwal, 2006). The trend in India is now towards shifting this burden of higher education off the shoulder of the government to the private entities be it in the form of fees, private loans, selling institutional services, industry-institute linkages, philanthropic donations, etc. The enrolments of students in Public HEIs and more or less Private aided institutes has almost stagnated, whereas the enrolments in Private Unaided Colleges have just less than doubled from 2000-01 to 2005-06 (Agarwal, 2006).

India thus, like many other nations is desperately in need of exploring resources other than government funding for financing higher education, rather than denying an access to the same. Since India is also facing financial crunch in higher education sector the present study inquires into the possibility of exploration of shifting some of this burden of higher education from the government to private sources using various means like cost-sharing and private financing. As this shifting the burden of higher education affects the financing patterns, naturally here the role

played by the key stakeholders like the parents, students, faculties, etc. is a very crucial one. So this research attempts to know the perceptions of various stakeholders on such financing related issues as associated with the Indian higher education.

REVIEW OF LITERATURE

Since 1950s various economists have recognized more and more clearly the role played by institutes providing higher education in the economic growth of knowledge economies, besides other knowledge producing institutions in an economy. Beginning from the simple Neo-classical Solow model (1956) incorporating knowledge/effectiveness of labour as the third variable in the firm's output function (besides capital and labour), the more improved models were then provided by Mankiw, Romer and Weil (1992) by augmenting the Cobb-Douglas production function to Solow model thereby proposing a link between educational expenditures and growth. An improved version better known as the Endogenous growth model as primarily propounded by Lucas (1988) also allows for an 'external effect' whereby the average level of human capital in the economy affects individual firms' outputs but is not taken account of, in their profit-maximizing decisions. These growth theories were followed by Screening Theories (Spence, 1973), suggesting that the level of attainment of higher education can be used as a tool to screen candidates for employment. These growth theories reasoned out the rise in social and private demand for higher education, which was still largely the responsibility of the government in most of the countries. In the midst of these rising pressures of higher education access, Perkinson (2004) observed globally a fall in the total public expenditure exactly compensated by the rise in the current private expenditure since 1996 to 2000. The rise

in the public sector was around 3.6%, private non-profit around 3.1% and a huge growth rate of 8% could be observed for the private for-profit institutes (Perkinson, 2004).

In the similar time-line as above historically the intellectual foundation for reapplying Smith's concept of privatization was laid by Friedman (1962) in his book *Capitalism and Freedom*. Poole (1976), Spann (1977) and Rothbard (1995) followed it. Advocates at Adam-Smith institute began promoting privatization in Britain in mid-1970s (Savas, 2001). Politically, the elections of Margaret Thatcher as prime minister of Britain and Ronald Reagan as president of the US in 1979 and 1980 respectively, gave impetus to privatization movement. According to Savas (1989), several major forces, or pressures, are behind the privatization movement: pragmatic, ideological, commercial and populist, as described in table 1.

"Table 1 - page #30".

More specifically Smith (1976; 1978) imprinted in the debate the emphasis on the positive contribution that competition and private supply could have in the effectiveness and responsiveness of higher education institutions, thus arguing in favour of the significant direct financial participation of students' families in the costs of the instruction their offspring received. Much later Johnstone (1999) described that the recent progress towards 'high privateness' in higher education is very fast as described in table 2.

"Table 2 - page #30".

Various avenues of cost sharing of the burden of higher education are now operational world-wide some of which are notably, introduction of and a sharp rise in tuition fees, dual fees structure, diminution of student grants and scholarships, effective cost recovery of student loan, opening up of higher education sector to

profit making private entities, sale of services by the HEIs, HEI stocks trading on stock exchanges, improved industry institute linkages thereby finding creative avenues of mutual benefits, etc (Agarwal, 2006). This research thus attempts to know the perceptions of various stakeholders of higher education, regarding the various tools that can be used for financing of higher education.

RESEARCH METHODOLOGY

OBJECTIVE: To know the perception of the selected stakeholders - parents on one hand and management, principals, and faculties on the other, regarding various tools for financing higher education.

DATA COLLECTION:

The research enumerates a case study of the higher education system and the related attributes in the Gandhidham taluka of Kachchh district in Gujarat state. Primary data collection was required to have the opinion and attitude of the stake holders in higher education, namely, parents, on one hand and management, principals, faculties of educational institutes on the other, regarding financing of higher education in government and private institutes. In Gandhidham, 7 colleges affiliated to Kachchh University and 3 institutes with AICTE affiliation exists. Thus Gandhidham taluka has the biggest higher education campus in the district. It has both private aided and unaided colleges. In the Gandhidham taluka traditional courses like, B.Com, M.Com, B.A., M.A. B.Sc., as well as professional courses like L.L.B., Diploma in Engineering, Bachelor of Education Training, Diploma in Pharmacy and Post Graduate Diploma in Business Management are also taught. Further various career oriented certificate and diploma courses like 'Foreign trade: Procedures and Practices', 'Tourism and Hospitality Management', 'Photography and

Table 1: The Forces behind Privatization

Force	Goal	Reasoning
Pragmatic	Better Government	Prudent privatization leads to more cost-effective public services.
Ideological	Less Government	Government is too big, too powerful, too intrusive, in people's lives and therefore is a danger to democracy. Government's decisions are political, thus are inherently less trustworthy than free-market decisions.
Commercial	More Business	Government spending is a large part of the economy, more of it can and should be directed toward private firms. State-owned enterprises and assets can be put to better use by the private sector.
Populist	Better Society	People should have more choice in public services. They should be empowered to define and address common needs, and to establish a sense of community by relying more on family, neighborhood, church and ethnic and voluntary associations and less of distant bureaucratic structures.

Source: Savas, 1989.

Table 2: Trends towards Private Higher Education

Dimension	High Public ----- High Private			
	(Traditional)		(Modern)	
<i>Mission/ Purpose</i>	Serves as a clear public mission as determined by the State/faculty	Mission avowedly both public and private	Mainly to respond to students' private interests	Mission serves private interests of students, clients, and owners
<i>Ownership</i>	Publicly owned	Public corporation or constitutional entity	Private non-profit; clear public accountability	Private for profit
<i>Sources of Revenue</i>	Public/tax payers	Mainly public, but some tuition or cost sharing	Mainly private, but some public assistance (to needy students)	All private, mainly tuition
<i>Control by Government</i>	High State control	Some control by the State	High degree of autonomy; State control limited to overseeing	Almost no control by the State
<i>Norms of Management</i>	Academic norms, shared governance, anti-authoritarianism	Academic norms, but acceptance of need for effective management	Limited adherence to academic norms, high management control	Operated like business, norms from business management

Source: Johnstone, 1999.

Videography', 'Food Science & Quality Control', etc. are taught. Also distance learning universities like the Indira Gandhi National Open University (IGNOU) study center and Dr. Baba Saheb Ambedkar Open University Study Center are operational, besides CA and ICWA study centers.

This primary data collection was a multivariate sample study inquiring about the perception related to more than one variable. The survey was carried out in two stages

1. Two different set of questionnaires each for 'parents of the students studying in higher education' and 'the faculties teaching in higher education' using personal distribution method, and

2. Structured interviews were conducted with the principals of these HEI. The survey was a completely exhaustive survey of the HEI in the taluka. 450 questionnaires were distributed among the parents out of which 437 respondents responded back and 138 questionnaires were forwarded to the faculties teaching in grant-in-aid and self-finance colleges (there are no government colleges or departments in the Gandhidham taluka), out of which 72 grant-in-aid faculties and 49 private institutes faculties responded back. Structured interviews were conducted for the 10 principals of the 10 HEI located in the area.

For survey through the questionnaires the population was divided into 3 different strata parents and students, faculties in private aided colleges and faculties in private unaided colleges for the sake of comparison. For the parents' category, the proportionate stratified sampling was applied between professional and general courses students, and students from private aided institutes and private unaided students. Questionnaires were constructed to infer the perception of these stakeholders of higher education, and

comprised of fixed/closed response questions of types like dichotomy questions, and multi-choice questions for scaled Responses. None of the questionnaires had open-ended questions (except if the respondents felt the options given were not explanatory, they would specify other options besides those given). Most of the questions were binary (i.e. with answers mostly expected to be answered in a 'yes' or 'no', except if the respondents were either 'unaware' or were 'not sure'). Most of the remaining questions were scaled responses (having a list of alternative responses to be answered giving maximum rating to the most preferred answer). Formal structured interviews were conducted face-to-face. This survey through structured interviews was necessitated to support or nullify the results reached at from the questionnaires above.

METHODOLOGY:

For analyzing the results of the questionnaire the parents' response sheets were categorized in groups of 30 each randomly on a first-cum-first-considered basis and numbered as A 1-30, B 1-30, etc. The data was classified under different heads of discrete series of attributes. Then the information gathered was tabulated using the tally bars and converted into frequency/condition series. The totals of these tally bars were then fed into a parent's master-sheet to be converted into percentage of responses. As for the teacher's questionnaire, they were first classified into two strata, private aided and private unaided (self-finance) for the sake of comparisons between the two. Thus it can be referred to as stratified population survey (since it was an exhaustive survey). Thereafter exactly the same process as described above for the parents was repeated for the teachers and percentages of the results were arrived at. Measures of central tendency and percentiles have been used for working out various parameters. One-dimensional

diagrams using clustered columns, clustered bars, marker-displayed lines with value pointers, and disaggregated pies with bars, etc. have been used for diagrammatic representation of data.

LIMITATION: One of the limitations of this paper is that the sample does not include the perceptions of government departments or policy makers for Higher Education in India, even though they play a crucial role as stakeholders as funding agencies, regulators and licensors of Higher Education.

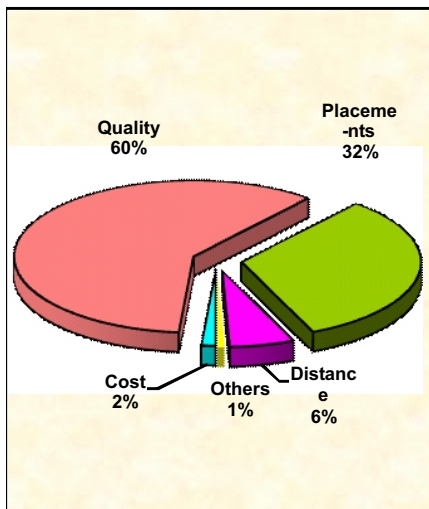
OBSERVATIONS & ANALYSIS:

The observations made from the questionnaires are as discussed below in three categories, results of the parent's survey, faculties' survey and principal's survey.

Results of the Parents' Questionnaire

The questionnaire prepared for the 'parents' produced the results as discussed here. The percentage (%) quoted here as results indicate the results as a % of total respondents. About 3 or 4 questions had about 3.2% to 4.7% people not responding, not even was the response 'I don't know' or 'I'm not sure' in such cases. The parents felt that the most important criteria in their selection of a higher education institute for their wards as shown in figure 1

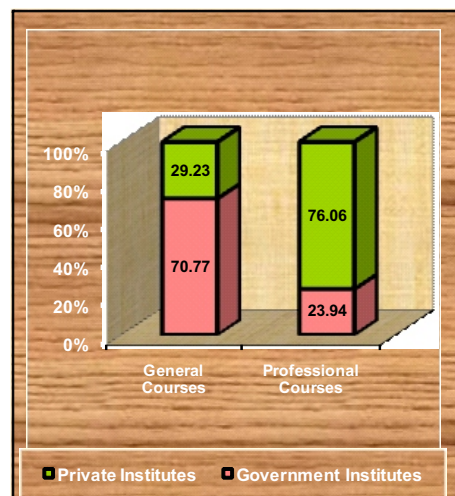
Figure 1 : Criteria for selection of a Higher Education Institute for wards



were 1.29% the cost incurred in the process of higher education is important, but a dominating 59.53% parents felt quality of the institute was important, 32.26% felt placements and earnings of the past pass-outs was needed to be observed, and 5.81% felt geographical distance from the residence was an important selection criteria while selecting a higher education institute, and 0.65% quoted some other criteria like institute ranking, faculties qualifications, etc. Thus clearly quality and placements dominate parents' decision of choosing a higher education institute, no matter at what cost or at what distance.

19.61% of the parents felt that there are adequate numbers of seats in government institutes to admit all students wanting admission, but huge number 64.05% parents felt they were inadequate, whereas 16.34% said they were unaware. 70.77% parents believed that the government institutes are able to attract better students in general courses but 29.23% believed that the private institutes are able to attract better students in general courses. Similarly, 23.94% parents believed that the government institutes are able to attract better students in professional courses but 76.06% believed that the private institutes are able to attract better students in professional courses. Thus as shown in figure 2

Figure 2 : Preferences for the Parents for General and Professional Courses



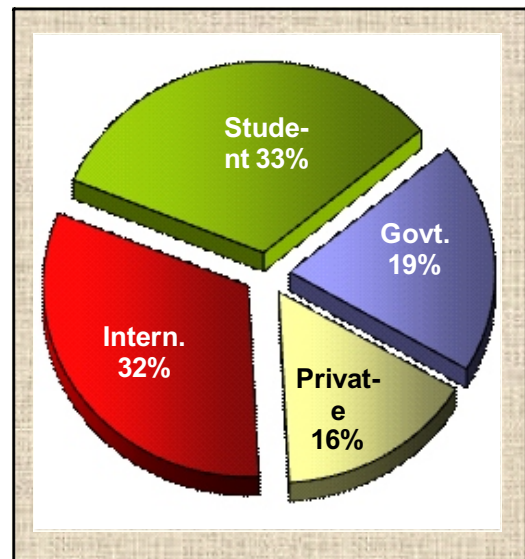
the preferences for traditional courses are government institutes, but when it comes to professional courses, preferences are private institutes. 38.17% parents felt that the private institutes charge very high fees, but according to 45.18% fees are high, 15.48% felt fees are appropriate, whereas none of the parents felt fees are low or very low in private HEI. 58.17% parents felt that the fees paid in private institutes are worth the money when the quality of education imparted in both private and government institutes are compared, but 28.17% felt that it was not worth and 13.73% responded saying that they were not sure. Parents who felt that the fees charged by private institutes are unaffordable to upper class were 5.25%, and 13.16% felt that private institute fees are unaffordable to upper middle class, 50.66% felt to lower middle class, 28.95% felt to poor, but as less as 1.97% felt that the private institutes fees are affordable to all. Quoting the reasons why economically poor parents do not send their children to HEI, 1.31% felt that they (children and parents) cannot afford to take the risk and uncertainty involved about the results, 11.76% felt that children of the economically poor parents have to start working at an early age, but a big number of 39.22% parents felt high fees was the reason, 24.18% felt other costs associated with higher education are high, whereas 23.53% felt all of the above reasons were responsible collectively for non-participation of the poor parent's children. Thus parents feel that private institutes are expensive to the extent of non-affordability by even the middle class, and so the economically poor students were sure to bear the brunt of high fees of such institutes.

51.95% parents felt that the government's decision of charging an "education cess" (a type of tax, the income of which is expected to be used for the development of education sector) was correct, but 26.62% parents felt it was incorrect and 21.43% parents responded by

answering that they were 'not sure'. 17.69% parents were of the view that if at all the government imposed a 'graduation tax' on employers for employing a graduate/an individual with higher degrees it should be charged from all graduate employers, 8.16% felt it should be charged only from the employers who employ graduates who graduated from government institutes only, 6.8% parents felt it should be charged only from private institutes graduates, since they were expected to benefit from their expertise also. Whereas a lot of parents 67.35% parents insisted that no tax should be further levied on any employer of a graduate. 44.52% parents were of the view that the bank loans were easily and readily available in India to finance higher education, but 46.45% parents felt they were not easily and readily available, and 9.03% parents said that they did not know.

On being asked as to who should be given the responsibility of controlling the quality of HEI, as depicted in figure 3

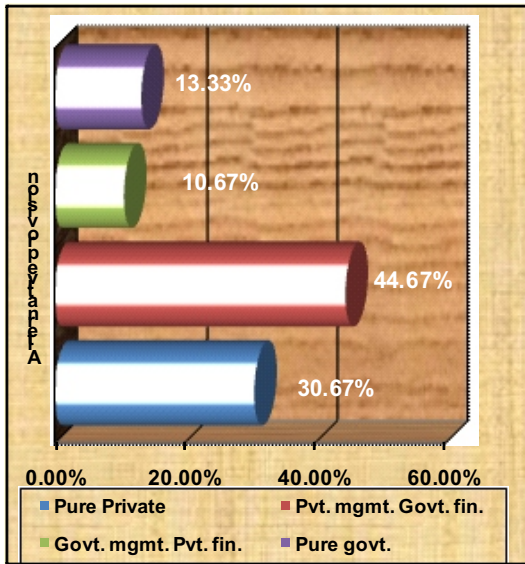
Figure 3 : Parents Preference for Quality Assurance Agency for HE



19.61% felt that this responsibility should be with a government quality maintaining institute, 15.68% felt with a private Indian quality maintaining institute, 32.03% felt with

an international quality maintaining institute, whereas an equally big number of parents - 32.68% perceived that the students, parents and potential employers can measure the quality on their own and so none was required. Finally, as shown in figure 4

Figure 4 : Parents faith on alternative Arrangements to provide HE



- 30.67% parents were of the view that to provide better quality higher education, the best set up was private management and private finance (basically student's fees), 44.67% parents felt private management and government finance (basically from tax earnings - direct/indirect) were better, 10.67% parents were of the view that government management and private finance (basically student's fees) was better an option and 13.33% parents felt that the government management and government finance (basically from tax earnings direct / indirect) were better. Thus parents felt that the management efficiency rests with the private institutes, but the government should finance the higher education. Nevertheless just a little lesser number of parents felt that they are ready to pay higher amounts, rather than be denied the higher education for their wards in government institutes, where they believed that the seats are limited. Parents positive perception regarding

the quality of private education is based on their perceptions regarding four factors namely faculty, infrastructure, student's evaluation and placements. Parents who felt that as compared to government institutes, teachers in private institutes were better qualified were 72.26%, more knowledgeable - 69.06%, more enthusiastic in teaching 77.69% and capable of using latest technology for teaching 84.17%, but only 48.84% parents felt that faculties in private institutes were as experienced as in government institutes. As for the infrastructure, approximately 88.96% parents on an average felt that private institutes had well-constructed and maintained building, 74.62% felt that they had enough quantity of library books, 75.54% - good quality reference books, 92.14% - computer and internet facilities, 75% - good instructional facilities like OHPs/LCDs and hygienic white boards markers, 66.21% believed they had an uninterrupted power supply duly supported by inverters or generators and 76.43% - well-equipped laboratories. On being asked if private institutes provided better quality of additional services like on-campus hostel facilities, transportation, easy finance, field trips, campus-recruitments, personality development training, and have easy administrative procedures on an average 75% responded by a 'yes' and about 18% by a 'no' and 7% said they did not know. On being asked if they felt that as compared to government institutes if the examination and the evaluation systems of the private institutes were more efficient and transparent, in judging a student's capabilities, 68.67% felt 'yes' and 16.66% said 'no', and 14.67% responded that they were unaware. 60% parents were of the opinion that the students from private institutes had better chances of employment and earnings in the job market, as compared to government institutes, whereas 31.61% felt the private institute students did not have better chances, and 8.39%

said they were not sure. A parent commented by saying that even students' capabilities played a big role. But they still feel that the government should be funding higher education as captured by their perception of 'no to a graduation tax', 'appreciation to low fees government institutes' and their concern over 'high fees charged by private institutes'.

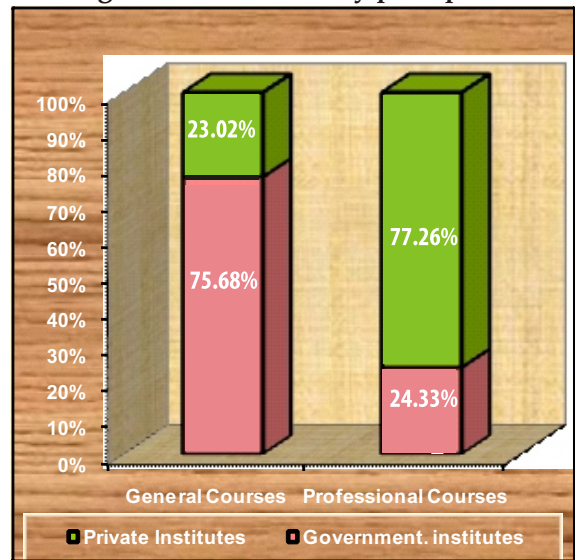
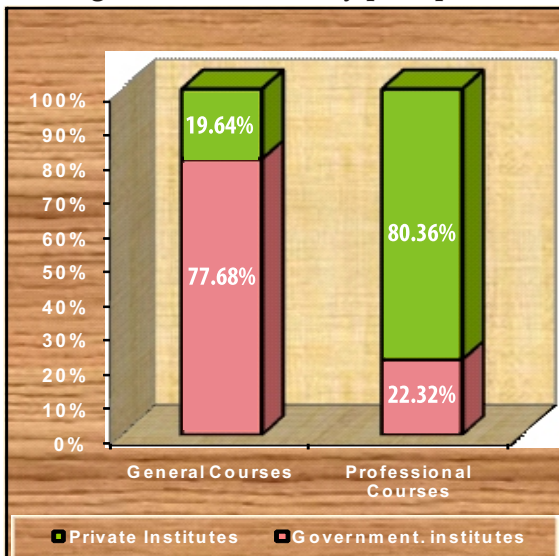
Results of the Faculty's Questionnaire

Besides a few additional questions here, the questions asked in the questionnaire for faculties were more or less the same as that meant for the parents. As mentioned above, the questionnaire meant for faculties were divided into two stratum faculties from private aided colleges (hereby referred to as PAC) and private unaided colleges - self-finance colleges (hereby referred to as PUC). The analysis of the results is done in the form of a comparison only if there existed a huge gap between the perceptions of the two categories of faculties, else they have been collectively analysed. The percentage (%) quoted here as results indicate the % of total respondents. Once again in about 3 to 4 questions faculties not responded ranged from 2.75% to 3.4%. As shown in figure 5,

in PAC 77.68% faculties believed that the government institutes were able to attract better students in general courses but 22.32% believed that the private institutes were able to attract better students in general courses. Similarly, 19.64% faculties believed that the government institutes were able to attract better students in professional courses but 80.36% believed that the private institutes were able to attract better students in professional courses. Whereas the same numbers for PUC were 75.68% preferred government institutes and 24.33% private institutes for general courses, and 23.02% preferred government institutes and 77.26% private institutes for professional courses.

15.41% of the total faculties felt that there were adequate numbers of seats in government institutes to admit all students wanting admission, but 79.47% felt they were inadequate, whereas 5.12% said they were unaware. When asked that as compared to government institutes if private institutes had a better teacher-student ratio on an average 55.55% of faculties responded by a 'yes', whereas 39.53% of faculties responded with a 'no' and 4.92% said they did not know. Indeed, the interviews with the Principals confirm a teacher student ratio of about 42.52 students

Figure 5: Faculties preference for the institutes for general and professional courses
Figure 5.a: PAC faculty perception **Figure 5.b: PUC faculty perception**



per faculty in PAC as against 16.82 in PUC inclusive of full time, part time and visiting faculties (The ratio is worst for PAC and better for PUC if only full time faculties are considered).

23.66% PAC faculties' felt that the private institutes charged very high fees, but according to 43.31% fees were high, 27.24% felt fees were appropriate, but 5.81% felt private institutes' fees were low. As against these the corresponding numbers regarding government institutes fees as perceived by the PAC faculties were that 42.86% felt fees were appropriate, 28.58% felt they were low, but 30.36% felt fees were very low. Similarly 18.92% PUC faculties' felt that the private institutes charged very high fees, but according to 56.76% fees were high, 24.32% felt fees were appropriate. As against these the corresponding data regarding government institutes fees were that 52.25% felt fees were appropriate, 27.93% felt fees were low, and 19.82% felt fees were very low. 58.27% of total faculties felt that in the government institutes higher fees should be charged from those capable of paying whereas, 37.71% of total faculties felt students should not be charged higher fees in government institutes, and 4.02% felt they were not sure. 64.31% of total faculties felt that the corporate houses should be permitted to sponsor some seats in some qualitative government HEI charging high fees, whereas 32.86% felt corporate houses should not be permitted in financing and 2.83% responded saying they were not sure. 37.25% of the total faculties felt that the private HEI they set for various courses, having received the consent of parents and students, but 60.94% faculties said private institutes should not be given such a freedom to set their fees, and 1.81% of the total faculties responded by saying they were not sure. 44.66% of the total faculties gave their consent in allowing the private HEI to make profit, but 55.39% faculties felt private

institutes should not be allowed to make profit. At the same time when asked if private institutes were not allowed to make profits, whether they would take the initiative to invest in higher education, 43.04% faculties responded by saying 'yes', 43.5% said 'no', and 13.46% felt they were not sure. But almost unanimously enough 81.17% of the faculties felt that such profit earnings, if at all were allowed to the private institutes, should be taxed, whereas 13.11% faculties felt they should not be taxed and 5.72% faculties said they were not sure.

On being asked as to who should be given the responsibility of controlling the quality of HEI 24.17% felt that this responsibility should be with a Government quality maintaining institute, 28.31% felt with a private Indian quality maintaining institute, 18.86% felt with an international quality maintaining institute, whereas 42.63% faculties felt that the students, parents and potential employers can measure the quality on their own and so none was required. 56.21% faculties felt that the government's decision of charging an 'education cess' (a type of tax, the income of which is expected to be used for the development of education sector) was correct, but 36.93% faculties felt it was incorrect and 6.86% faculties responded by answering that they were not sure. 16.83% faculties were of the view that if at all the government imposes a 'graduation tax' on employers for employing a graduate/an individual with higher degrees it should be charged from all graduate from the employers who employed graduates who graduated from government institutes only, 6.95% faculties felt it should be charged only from private institutes graduates, since they were expected to benefit from their expertise also whereas 66.59% faculties insisted that no tax should be further levied on any employer of a graduate. 49.78% faculties were of the view that the bank loans were easily and readily

available in India to finance higher education, but 40.35% faculties felt they were not easily and readily available, and 9.87% faculties said that they did not know. On inquiring as to what should be the source of income of an institute providing higher education 53.33% of total faculties felt that government grants should be the source, 13.42% faculties felt that fees should be collected from the students 13.01% faculties felt that donations from individuals and donations from institutes should be the source, 3.14% felt that revenue should be generated from selling services of the institutes (like providing halls, auditoriums, conference rooms for commercial purposes selling laboratory services, etc.) and finally 4.95% of the faculties felt that revenue should be generated from the fund raised from the alumni associations. 30.36% of the PAC faculties and 13.51% of the PUC faculties felt that the biggest problem faced by the government higher education institutes today was the lack of financial capabilities, but worthy noting is that 41.07% of the PAC and 43.24% of the PUC faculties felt that the biggest problem was that the faculty vacancies were not being filled, 3.57% of the PAC faculties and 13.51% of the PUC faculties felt that the decision making processes were highly politicized, whereas 12.5% of the PAC faculties and 10.81% of the PUC faculties felt that the lack of accountability and answerability to anyone was the biggest problem, and 7.14% of the PAC and 8.11% of the PUC faculties felt that lack of incentives and punishments were the biggest problems, and 5.36% of the PAC and 10.81% of the PUC faculties felt that prevalence of highly corrupt practices in the government higher education institutes was the biggest problem. 36.16% of the PAC and 35.84% of the PUC faculties felt that the most ideal set up for providing better quality higher education was that the institutes be privately managed and privately financed through basically student's fees, whereas

39.74% of the PAC faculties and 35.84% of the PUC faculties felt that HEI should be privately managed and should be financed by the government from basically the tax earnings direct/indirect, 8.93% of the PAC faculties and 14.21% of the PUC faculties feel that the HEI should be managed by the government and financed privately through student's fees and 14.74% of the PAC and 14.21% of the PUC faculties felt that the HEI should be both managed and financed by the government.

Results of the Structured Interview with the Principals

As mentioned above a structured interview was conducted with 10 principals and directors, which was a completely exhaustive survey of the HEI of the Gandhidham Taluka. This survey was necessitated to support or nullify the results reached at from the questionnaires above, since they were opinions and the results of these interviews, were facts. These interviews were conducted one-to-one with the principals, and most of the information collected was facts (and less of their perceptions) related to their respective colleges. Out of the 10 colleges, 4 colleges were private grant-in-aid and 6 colleges were private unaided colleges (self-finance). As shown in table 3 and

Table 3 : Table showing the number of faculties with qualifications in the Private Aided Colleges (PAC) and Private Unaided Colleges (PUC)

FACULTY	Bachelors		Masters		M.Phil.		Ph.D.		Total	
	PAC	PUC	PAC	PUC	PAC	PUC	PAC	PUC	PAC	PUC
Visiting	6	1	16	5	1		2	1	25	7
Part-Time			4						4	
Full-Time	27	12	32	29	5	2	13	1	77	44
Total	33	13	52	34	6	2	15	2	106	51

all in all, the grant-in aid colleges employed 77 full-time faculties, 4 part-time faculties, and 25 visiting faculties. As against these, the self-finance, private unaided colleges employed 44 full-time faculties and 7 visiting faculties. The details of these faculties' qualifications are as depicted in the total numbers. Though the table does include double counting, but it was necessitated due to the inter-college comparisons (like a faculty who was a Ph. D. might have been a full time faculty in a PAC and a visiting in a PUC at the same time, but if he was shown in either of the two colleges, the other college would show a lesser number of faculties. So double-counting could not be avoided).

It can be observed that clearly the PAC employed a lot more faculties than the PUC. But this was in accordance with the gap between the numbers of students in the respective colleges. As mentioned above the teacher student ratio in PUCs (16.82) was much better than that in PACs (42.52). But the point worthy noting is the rising number of the visiting faculties in the private aided colleges, because of vacant posts of faculties. Thanks to the commitment of the managements, these colleges thus spent huge amount of money per annum on the visiting faculties, rather than let students go without classes. Also in none of the colleges the faculties were less than qualified to teach. The faculties shown with a bachelor's degree here are ones with a bachelor of engineering or pharmacy, and so are eligible to teach in diploma of engineering or pharmacy. Also it was observed that largely they were paid the government scales, if not immediately then surely after one year of probation.

At the end of every questionnaire, the respondents were requested to put some comments regarding the Indian higher education, as they perceived the problems in the system or give solutions or comments. In

this context most of the parents felt that higher education especially in private was unaffordable and so the costs should be reduced, no donations should be charged, and further suggested that there should be tie-ups between HEI with banks to provide loans, etc. A few parents were hopeful that if government institutes improve quality further, then parents searching for quality at affordable rates would have one more option besides, private higher education. One parent insisted that brain drain of Indian students to UK and Australia could be controlled by providing better quality infrastructure in the HEI, since he was of the view that students get attracted to foreign institutes by their instructional facilities.

Besides the above suggestions in common, faculties added comments as discussed here. One of the faculties felt fees in the government institutes should be increased for a greater commitment from students for their money worth. They felt that the government should fill faculty vacancies.

And finally principals commented on various issues discussed below, excluding those discussed above. One such principal suggested that there should be autonomy to charge fees by college/institutions with market forces to decide 'the survival of the fittest'. It is suggested that more professional courses institutes be developed in the deprived areas. He also suggested that the NAAC accreditation should ensure certain grants to be provided for capital investments with the commitment by the management to show qualitative change in the institute.

FINDINGS

❖ Most of the parents responded by giving maximum weightage to quality of an institute while selecting an institute of higher education for their wards, followed by placements.

Both parents and faculties felt that seats in government institutes are inadequate. A preference for government institutes for traditional courses and private institutes for professional courses got highlighted. Most of the respondents felt that private higher education fees were high or very high, unaffordable to the poor. To the extent that they would not send their wards for higher education due to both higher fees and various other costs associated with the higher education. But they also felt that they were worth the money paid. As against this most of the parents & faculties felt that the fees charged by the government institutes were low and should be higher for those capable of paying, they thus indirectly supported the dual fees structure.

❖ Most of the parents (52%) & faculties (56.21%) felt that the government's decision to charge an education cess was correct, but the parents (67.53%) & faculties (66.59%) opposed greatly any levy of a graduation tax on the employers, employing graduates. Graduation tax is based on the logic that most of the higher education was subsidized and so should be later paid by the beneficiary, i.e. employer.

❖ An almost parallel number of parents (44.52%) said that education loans in India were easily available as against that they were not available. Whereas 50% of faculties felt that such loans were easily available.

❖ Almost an equal number of parents relied on any international foreign quality agency or students, parents and employers as good quality raters (32% each). Whereas 42.63% faculties relied on students, parents and employers as good quality raters followed by private quality rating agencies and to them international agencies were the last option.

Also interestingly 44.67% parents preferred a government funded (through tax), privately

managed higher education institute as against 35% of the faculties. About another 30.67% preferred a privately funded (through student's fees), privately managed higher education institute, as against 35% of the faculties. The preference for privately managed institutes was backed by factors like faculty skills and attitude, infrastructure availability, evaluation and assessment and placements. At the same time public funding was appreciated on the grounds that private would charge high non-affordable fees, governments give subsidized higher education, and the need to mandatorily acquire higher education for the economic upward mobility in the society.

❖ A huge number of faculties (64.31%) felt that the corporate houses should be permitted to sponsor some seats in expensive government HEI. Even though the maximum number of the faculties felt that faculty vacancies not being filled was the biggest problem (40% +), yet another 30% faculties felt that financial resource crunch was the biggest problem in the government HEI.

❖ A dominating number of faculties (61%) felt that the private HEIs should not be given freedom to set fees, even though an equal number of faculties (43%) felt that the private sector 'will' and 'will not' then initiate investments in HEI. Most of the faculties (55%) felt that profit making should not be allowed to private HEI, as against a closer number (45%) of faculties who said that they should be allowed. But without much apprehensions almost unanimously (81%) faculties responded that if any such profits were permitted to be earned, they should be taxed.

On inquiring as to what should be the source of income of an institute providing higher education 53.33% of total faculties felt that government grants should be the source, 13.42% faculties felt that fees should be collected from the students 13.01% faculties felt

that donations from individuals and donations from institutes should be the source, 3.14% felt that revenue should be generated from selling services of the institutes (like providing halls, auditoriums, conference rooms for commercial purposes selling laboratory services, etc.) and finally 4.95% of the faculties felt that revenue should be generated from the fund raised from the alumni associations.

❖ During the principal's structured interview a dominating fact that was observed was the big number of visiting faculties that were employed in these HEIs.

CONCLUSIONS

It is thus very important to know the stakeholders perceptions about the HEI, since they are the ones who are the participants in this sector, either as a customer, as a beneficiary or as a provider. The one who provides higher education should know what is expected out of the service. At the same time the perceptions of the one who is to benefit from the service provided is equally crucial to be known, for optimizing their satisfaction level. Thus on the basis of this study one can conclude that the parents perceive that for professional courses, qualitative education, and producing employable qualified students the private unaided colleges are best suited even though the fees may prove to be for some, high. Parents perceive, private unaided colleges can provide affordably enough access to higher education. As perceived by mostly the faculties, the rewards to them can be performance based and the various sources to fund the higher education should be explored besides the traditionally available ones. According to the perception of principals, faculty vacancies are a tough challenge. They also were of the opinion that an overall development of the students' along with the academic development was very crucial.

Thus, the perception of the stakeholders if addressed with sincerity, may result in greater satisfaction from higher education systems, and at times may also give optimum utilization of the resources wherever desired by the society at large.

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What explains the market: finance theories or psychology?

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Abstract

It's hard not to predict of the stock market as a person: it has moods that can turn from irritable to euphoric; it can also react hastily one day and make amends the next. Can psychology really help us understand financial markets? Does it provide us with hands-on strategies for stock selection? Will behavior finance help investors to beat the market?

Behavior finance argues that people are not nearly as rational as traditional finance theory makes out. For investors who are curious about how emotions and biases drive share prices, behavioral finance offers some interesting descriptions and explanations.

The idea that psychology drives stock market movements disproves in the face of established theories that advocate that markets are efficient. Proponents of efficient market hypothesis say that any new information relevant to a company's value is quickly priced by the market through the process of arbitrage.

For anyone who has been through the internet bubble and the subsequent crash, the sub prime crises and the meltdown in global stock indices for such a long time, the efficient market theory is pretty hard to accept. Behaviorists explain that irrational behavior is in commonplace. In this paper, researchers have tried to identify some irrational behavior of the investors in the

current market place while investing in capital market. The arguments are based on primary data collected from the investors in the volatile market.

Section I

Introduction

Since the 1950s, theories of finance have assumed investors to be rational and objective decision makers. Focus of all finance theories has been on market efficiencies with little or no attention being given to the influence of human emotions on the investment process.

The Efficient Market Hypothesis (EMH) assumes that stock prices move in a random fashion. It asserts that share prices reflect all relevant information and it is not possible to predict stock price movements. In reality though, markets are not efficient in the strong form of efficiency.¹ Empirical studies have not borne out validity of the efficient market hypothesis in the strong form of efficiency; behavioral finance does give insights relating to the investor decision making process. However, behavioral finance's utility as a proactive investment tool is yet to be ascertained. In the present study researchers are focusing on the study of different behavior of the investors while investing in the Indian stock market.

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Behavioral finance attributes stock market irrationality (when stock market is not responding to the fundamentals) to six traits that lead to errors of perception and judgment, overconfidence, pain of regret, cognitive dissonance, anchoring representativeness and myopic risk aversion. The stock market is a reflection of these emotions and perceptions of investor's community. These beliefs of the investors do not necessarily reflect what the economy is doing at any specific moment.

Take the euphoria of stock buyers in India at the end of 1999 and the beginning of 2000. All the mass psychology (Nicholas Barberis)² was bullish and everyone believed that market was going to go higher. The market reacts differently and stock prices declined. The market was a reflection of what investor's couldn't predict.

If the mass psychology becomes too negative it can cause massive selling and even the best equities will lose its value. The example of this was what happened when the World Trade Center was destroyed. Selling was caused by panicky in the market and had little to do with valuation. In India investors experienced the same when the dot-com bubble was burst. The highly irrational pricing of stocks was not matching with the efficient and

rational behavior of the participants. Studies by economists and psychologists have found that investors are most influenced by recent events - market news, political events, earnings, and so on-- and ignore long-term investment and economic fundamentals.

Peter Bernstein in his 1996 book 'Against the Gods' states that 'the evidence reveals repeated patterns of irrationality, inconsistency, and incompetence in the ways human beings arrive at decisions and choices when faced with uncertainty.'

A field known as 'behavioral finance' has evolved that attempts to better understand and explain how emotions and cognitive errors influence investors and their decision-making process.

This paper argues that people are not as rational as traditional finance theory makes out. The following section II, describes review of literature consisting evidences for rational behavior and arguments for irrational behavior of the investors. Section III states the objective and the method used for the study. Section IV reports findings of the survey. Finally researchers conclude the paper in section V.

Section II

Literature review

Behavioral finance is study of the influence of psychology on the behavior of investor while investing in stock market. It attempts to better understand and explain how emotions and cognitive errors influence investors and the decision-making process. Behavioral finance is believed by many as an effective tool to explain the efficiency of financial markets, stock market anomalies, market bubbles, and crashes. Behavioral finance attributes such stock market irrationality to some factors. Overconfidence: Investors are often overconfident about their own abilities in relation to others' abilities. As a result they tend to overestimate the accuracy of information. Investors believe that they have superior forecasting abilities and control over the occurrence of future events. This results in an investor trading excessively. Excessive trading in turn does not imply higher returns.

Pain of Regret: Very often, investors are unwilling to admit to their mistakes. This leads to investors avoiding harsh decisions or delaying them. The result is that investors hold on to losing stocks and selling of potentially good stocks too soon.

Cognitive Dissonance: This refers to investors' tendency to deny or avoid conflicting information. Investors try and seek a source of information that is in line with their own thinking and that will support their view. Any source providing conflicting information is immediately discredited and ignored.

Anchoring: This refers to choosing the wrong point of reference. It is important that investors take decisions based on a detailed analysis rather than focusing only on a few specific attributes of a stock. For example, recent prices and earnings of a company may not necessarily guarantee similar returns at a future point in time.

Representativeness: Classifying stocks as "good" stocks or "bad" stocks on the basis of a few characteristics can lead to errors of judgment. It is important to acknowledge that reclassification of stocks over a period of time is necessary. "Bad" stocks may move to the "good buys" category and "good" stock may slip to "not good buys" category over a period of time.

Myopic Risk Aversion: Investors have a tendency to take decisions based on short term gains rather than having a long term perspective. Such shortsightedness can lead to losses at a future point in time.

Prospect Theory (loss aversion) here is one experiment: offer someone a choice of a sure Rs.50 or, on the flip of a coin, the possibility of winning Rs.100 or winning nothing. Chances are the person will pocket the sure thing. Conversely, offer a choice of a sure loss of Rs.50 or, on a flip of a coin, a loss of Rs.100 or nothing. The person will probably take the coin toss. The chance of the coin flipping either way is equivalent for both scenarios, yet people will go for the coin toss to save themselves from loss even though the coin flip could mean an even greater loss. People tend to view the possibility

of recouping a loss as more important than the possibility of greater gain.

The priority of avoiding losses holds true also for investors. No matter how low the price drops, investors, believing that the price will eventually come back, often hold that stock.

Prospect Theory (Risk aversion)

Investors have two very different feelings while investing in the stock market: pride and remorse. Pride is the pleasurable feeling investors have when investments do well. Remorse is the painful feeling investors have when their investments do poorly.

Investors are attracted to stocks when they are at its peak and they feel comfortable. Then when a correction occurs, they become risk averse and sell their investments when actually they should buy it.

Herd behavior

Explains why people tend to imitate others. When a market is moving up or down, investors are subject to a fear that others know more or have more information. As a consequence, investors feel a strong impulse to do what others are doing. Investors tend to place too much worth on judgments derived from small samples of data or from single sources. In an ideal scenario, investors would buy and sell investments without emotion.

Herding reduces the time for analyzing before investments, also helps to reduce feelings of regret if the investment choice was a bad one, having comfort of knowing that they were not alone in their decisions.

An example the stock market crash on October 19, 1987, on that day, the Dow Jones Industrial Average dropped nearly 23% in the largest single day decline in history. To understand the behavior of investors during this market drop, Robert J. Shiller³ conducted a survey of

nearly 900 investors within a few days of the 1987 crash. One of the most interesting findings of his study was that 25% of the investors said the crash was caused by irrational behavior of investors. In the survey, researchers asked participants to cite what they thought were more responsible for the crash: economic fundamentals, such as corporate profits or interest rates, or investor psychology. A surprising two thirds of the surveyed investors cited psychology, rather than economic justification.

Frame of Reference

Another factor that affects investor decision making is the investor's particular frame of reference at the time of a decision. Research has shown that when asked to choose among two alternatives, people will reach opposite decisions based solely on their current situation. The two most common investor frames of reference are situations in which the investor is currently losing money or currently making money.

Research has shown that investors tend to become more risk averse when they are facing the prospect of a gain and more risk seeking when they are facing the prospect of a loss.⁴ A study was performed on trading behavior of investors. Researcher found that investors tend to sell more of their "winning" stocks than their "losers" - even though the winning investments they sell subsequently outperform the losers they continue to hold. This study also concluded that investors don't want to take additional risks with stocks in which they have already made money. However, they will tend to hold on and risk additional losses with stocks they are currently losing money on.

Some market anomalies which indicate irrational behavior of the stock market players: Despite strong evidence that the stock market is highly efficient, there have been many

studies that have documented long-term historical anomalies in the stock market that seem to contradict the efficient market hypothesis. While the existence of these anomalies is well accepted, the question of whether investors can exploit them to earn superior returns in the future is subject to debate.

Behavioral finance is helpful for better understanding of those elements of human psychology, both cognitive (mental) and affective (emotional) that influence the decision making process. The origins of behavioral finance have a strong theoretical foundation in the fields of experimental and cognitive psychology, sociology, and behavioral economics.⁵

The under pricing phenomenon of Initial Public Offerings (IPOs) has been widely studied across different stock markets around the world and has often been explained to be a result of asymmetrically distributed information and ex-ante uncertainty (Andreas Oehler, Marco Rumber and Peter N. Smith).⁶

The paper by, (Raffaella Barone, 2003)⁷ pointed out the role assumed by behavior finance in order to explain financial market trend in the last few years, which doesn't seem to respect classical financial theory principles: price equals stock fundamental value. The two approaches make two different assumptions. The efficient market theory assumes that, investors are rational, they have complete information, and they maximize expected utility. Behavior finance asserts individuals are not always rational, hence it supplies new hypothesis on individual's preferences and it proposes a new expected utility theory (Prospect Theory). Therefore, considering human weaknesses, which push an individual into making anomalous selections, behavior finance seems a more realistic approach as per

the researcher. Researcher concludes, investor behaves rationality, which was assumed by efficient market hypothesis, just is an illusion.

Ashok Chaudhary, 2008⁸ argued that while conventional academic finance emphasizes theories such as modern portfolio theory and the efficient market hypothesis, the emerging field of behavior finance investigates the psychological and sociological issues that impact the decision-making process of individuals, groups, and organizations. This study discuss some general principles of behavior finance including the following: herd behavior, communal reinforcement, loss aversion, adaptive attitudes, financial cognitive dissonance, the theory of regret, and prospect theory. In conclusion, the paper provides strategies to assist individuals (professionals) to resolve these "mental mistakes and errors" by recommending some important investment strategies for those who invest in stocks and mutual funds.

Different methodologies were used by behavioral researchers to understand behavioral aspects, P. Krishna Prasanna (2007)⁹, examines the perception of Indian academicians and researchers on the significance of experiment as a research method. The above study empirically establishes the academic conviction that experimental research is an effective method. The results also confirm the belief that experiments are very useful in financial research, particularly to understand the behavioral aspects.

While discussing in their paper on behavioral Finance Investors' Behavioral Finance Investors Rationality (Berne us, Hanne's Sandberg, Carl Wahlbeck, David)¹⁰ examine if professional investors are indicating tendencies of irrational behaviour when exposed to certain psychological dilemmas related to the financial world. The findings

were that within the target group, the level of irrationality linked to psychological dilemmas is common. It was found that Anchoring and Gambler's fallacy both indicated strong biases, compared to overconfidence that indicated low tendencies.

"Thought and Behaviour Contagion in Capital Markets" was written by David A. Hirshleifer and Siew Hong Teoh¹¹ discusses that prevailing models of capital markets capture a limited form of social influence and information transmission. In reality, individuals often process verbal arguments obtained in conversation or from media presentations, and observe the behaviour of others. They review here evidence concerning how these activities cause beliefs and behaviour to spread, affect financial decisions, and affect market prices; and theoretical models of social influence and its effects on capital markets. Social influence is central to how information and investor sentiment are transmitted, so thought and behavior contagion should be incorporated into the theory of capital markets.

Though there are studies that argue that financial markets are efficient, Anomalies of prices and returns are usually seen and identified. The reasons for these are due to investor's mental beliefs and biases. Present research is an attempt to study the irrational behaviour of investors in the market based on the said mental bias.

Previous researches in other countries and in India were based on experimental research. The present study was conducted using survey method in India when the market was quite volatile so that respondent would respond in simulated environment.

Section III Objective and method

The objective of the paper is to understand the investor's behavior while investing in stock market and to find out the behavioral

influences, on the investment decision of retail individual investors in the Indian stock market. The next paragraph states the data collection method, chosen target group, sample size and location.

Methodologically, behavioral finance operates at three levels: (i) it conducts experiments with subjects under controlled laboratory conditions; (ii) it studies real-world financial decisions made by individuals, households, financial professionals and corporations; and (iii) it looks into the behavior of financial markets.

This is empirical research arguing mainly on two parameters: Anomalies in the stock market and analysis of the human behavior while investing in stock market. The tool used for this is survey and the instrument was questionnaire. The sample size is 82 and the location is Gandhidham and Adipur, Gujarat

To study and understand "behavioural finance theory and emotional process involved while investing in share market, observations were made from secondary data sources. Few beliefs and anomalies in behavioral finance theory are discussed. A secondary data source includes journal papers, financial dailies, related websites and books.

The questionnaire was made on the basis of few observed behavior of the investors while investing in the stock market. Almost all questions are framed on some theoretical assumptions, For example investor sells the stock if the absolute return is more in one stock as compared to other stock wherein the % gain may be the same. This reflects 'Innumeracy' behavior. Researchers intend to check few of such behavior empirically, so the survey method and questionnaire instrument selection seems to be appropriate. The questionnaire was tested before administrating to avoid probable biases. The target group has

been referred to as professional investors, which includes brokers and people who invest in stock market. The reason for choosing this target group is because they are considered most relevant as they are, responsible for others' money and own investment. The analysis is done by using SPSS (frequencies and percentages)

Limitation: Investors might have responded to the questions rationally but may behave differently when faced the situation in reality.

Observations on the basis of secondary data regarding stock market ups and downs

Stock market crashes are in fact social phenomena where external economic events combine with human behavior and psychology in a positive feedback loop, where selling by some market participants drives more market participants to sell. World has witness crash in stock market 1929, 1987 and 2008. Herd behavior played a critical role in all stock market crashes.

If one observe the journey of the Sensex (an index comprising of 30 stocks of Mumbai Stock Exchanges) over last 10 years, the reasons for bubbles in the Sensex can not be outcome of only fundamentals of the company. Some behavioral aspect of the investors was playing a major role. Researchers tried to find out the probable reasons for boom in market and the days that Sensex took to move 1000 points up. (Refer annexure II)

A stock market bubble is a situation in stock markets when price of shares rise and become overvalued as compared to its intrinsic value. Behavior finance theory attribute stock market bubbles to cognitive biases that lead to herd behavior.

Generally speaking, crashes usually occur under the following conditions: a prolonged period of rising stock prices and excessive

economic optimism, a market where price earning ratios exceed long-term averages where markets are trading more than what the fundamentals are.

Stock market bubble is an example of positive feedback. A rising price on any share will attract the attention of investors. Not all of those investors are willing or interested in studying the intrinsic of the share and for such people the rising price itself is reason enough to invest. Stock market bubbles frequently produce hot markets in IPOs, since investment bankers and their clients see opportunities to float new stock issues at inflated prices.

Section IV

Finding and analysis

Astrology advice

Financial astrology is one of the emerging fields in finance with many market participants moving towards astrologers to seek advice before taking a call on their investments. In our survey it was observed that less than 9 percent of the sample bank on astrology for their financial decisions and a large number (63 percent) do their finances considering various other factors.

Panicky behavior

This question was asked to find out whether investors panic due to any temporary problem or crisis situation. Here also it has been observed that about 60 percent of the respondents view such attacks as a temporary problem and do not panic in such circumstances and stay in the market with confidence.

Representativeness:

This question was asked to ascertain if people tend to form judgments based on stereotypes. This kind of bias is called representativeness in behavioral finance theory. The theory assumes

that people tend to get attracted towards MFs with good returns in the past without analyzing if high returns were earned by managerial skill or were just a matter of chance. In the survey it was found that about 75 percent of the sample opted for investments in such funds which had outperformed the market in the past. Hence this behavior was largely found in the sample.

Self Attribution Bias

One of the behavioral tendencies observed as per the literature on behavioral finance is 'Self Attribution Bias' which means that people generally tend to ascribe their success to their skill and failure to bad luck. To check this attribute, investors were asked about their best performing and worst performing stocks in the last 6 months. It was observed that 57 percent of investors believed that the good returns on the stocks were because of their analysis and conscious choice of the stocks whereas 25 percentages called it their good luck to have earned handsome returns. Similarly for the bad performing stocks about 41 percent investors blamed themselves for bad judgment on the stocks. According to 25% people luck is the major factor for their losses and gains. On the basis of the responses the above behavior is not prominently observed.

Familiarity:

As per one of the behavioral finance theories, investors tend to prefer stocks of local companies or their employer companies since they find these companies more familiar.

In our survey we found out that about 64 percentages of people do give importance to this factor while making their portfolio. Only about 20 percent said that this fact that the company is located nearby, would not have any influence over their investment decision.

Innumeracy:

One of the problems observed is that people tend to have problems with understanding numbers for e.g they tend to give more weightage to nominal changes rather than real changes, similarly they tend to pay more attention to big numbers and give less importance to small figures. To verify this tendency respondents were asked 2 similar questions (Q.9 and Q.18) but with different stock prices. The idea was to check if people made different decisions for both the cases in spite of same percent of return on investment in both the cases. It was observed that when the investors earned a return of Rs 6, 45 percent people preferred to hold it while only 39 percent said that they would book their profits. For the same percentage gain on investment amounting to Rs 300 on each share, about 36 percent wanted to hold it for further appreciation while more than 48 percent chose to book their profits. This difference in behavior was found in spite of the fact that in both the situations the return was 15% on investment. About 9 percent more people wanted to sell the stock when this return in nominal terms was Rs 300 as compared to Rs 6 per share. This shows that some people give more importance to absolute rupee values rather than real returns.

Prospect theory

According to the Prospect theory proposed by Kahnmen and Tversky, people tend to have a concave function for gain and a convex utility function for losses. Also they feel more strongly about losses and hence are more willing to take risk to avoid losses whereas they become conservative and book profits very easily and do not take a chance in gains. To verify this theory, two cases (Q. 10 and Q.11) were presented to the respondents each with two options. All the four options had the same expected value of Rs 150000, but still people

had different choices in case of certain gains and certain losses. 69 percent people preferred to chose certainty in case of gains as compared to 55 percent choosing for certain losses. More than 41 percent chose to take a chance in order to avoid a loss whereas only 28 percent of them were ready to take a bet involving uncertain gains. This contrasting behavior can be ascribed to loss aversion in people. Also some conservatism in case of gains can be observed.

Mental Accounting:

It is argued that people tend to have mental accounts for their wealth for e.g. they tend to view and treat money in one mental account differently than money in another account because each account has a different significance for them. It has been argued that people feel more comfortable spending their extra earning like bonus, incentive, lottery etc in a lavish manner than they would with their regular income like salary. To check how differently people tend to take decision with money earned from sources other than their regular source of income they were asked (Q. 12) what they would do with money won in a popular game show. Contrary to the belief, more than 81 percentages of people tried to take a rational call as they would be doing with their hard earned money and mentioned their investment choices based on their judgments.

Herd behavior/ Anchoring:

From the sample more than 65% respondents invest in IPOs out of which 50% investors invest with the objective of listing gains. When asked about R-power IPO almost 61% of the sample had invested in R-power IPO and 46% of the sample believed that company is having good future prospectus. Less than 15% invested on the advice of the experts. While analyzing the questionnaire we could find that some respondent who generally did not invest in IPOs invested in R-Power.

Many market experts had warned against this IPO for short term listing gain since the gestation period of the project was expected to be 7-8 years. In spite of this almost all of the regular IPO investors from our sample invested in R-Power probably because it had name Reliance with it. Eventually the stock stabilized with its intrinsic value which was far below the IPO rate due to which many investors lost their money. Researchers could observe herd behavior while Reliance Power IPO.

Section V

Conclusion

While analyzing from secondary data sources, the reasons for the movement of the major index of Indian stock market researchers found out the sharp upward movement of market with very little span of time. This situation can be attributed to some emotions of the Indian investors rather than some rationale decisions.

While analyzing the behavioral influences on the investment decision of the retail investors in Indian stock market, representativeness bias, familiarity, innumeracy, prospect theory and herd behavior were observed. Investors are not seeking advice of the astrologer and they don't sell their stocks in panicky. Self Attribution Bias and mental accounting biases were not prominently observed in the present study.

The application of behavior finance is still to explore like, how can an investor beat the market and can make the money. It tells us that psychology causes market prices and fundamental values to diverge for a long time and can help investors train themselves how to be watchful of their behavior and, in turn, avoid mistakes that will decrease their personal wealth. Behavioral finance does give insights relating to the investor decision making process. However, its utility as an investment tool is yet to be proved.

^{1.} I.M Pandey (pg 420), Financial Management, Vikas Publishing House PVT LTD

^{2.} Nicholas Barberis & Richard Thaler, 2003, A survey of behavioral finance (Ch 18), Handbook of the Economics of Finance, available at :http://badger.som.yale.edu/faculty/ncb25/ch18_6.pdf

^{3.} Investor behavior in the October 1987 stock market crash: Survey Evidence, Nov 1987, Robert J. Shiller, NBER working paper # 2446, available at : <http://www.nber.org/papers/w2446.pdf>

^{4.} Behavioral Finance: Beyond Greed and Fear, Retrieved from : http://www.groco.com/readingroom/invest_behavioral.aspx

^{5.} Mihaela Popa Chraif, (May 2005), Behavioural Finance and the Emotional Impact of Charts in Trading, Europe's journal of psychology, Vol 2 (No.8)

^{6.} Andreas Oehler, Marco Rummer & Peter N. Smith, Is the Investor Sentiment Approach the Solution to the IPO Underpricing Phenomenon?

^{7.} Raffaella Barone, 2003, From Efficient Markets to Behavior finance, University of Lecce Economics Working Paper No. 46/24

^{8.} Ashok Chaudhary, 2008, A Behavior finance Study to Analyse the Investment Behavior of Mutual Fund Investors (with Reference to the Professionals)

^{9.} Experimental Research in behavioral finance: Perceptions of Indian Researchers, February 2007, The Icfai Journal of Management Research, Vol. 6, No. 2, pp. 7-25

^{10.} <http://hj.diva.portal.org/smash/record.jsf?pid=diva2>

^{11.} Hirshleifer, David A. and Teoh, Siew Hong, Thought and Behavior Contagion in Capital Markets (June 16, 2008). HANDBOOK OF FINANCIAL MARKETS: DYNAMICS AND EVOLUTION, 2009. Available at SSRN: <http://ssrn.com/abstract=1145884>

Annexure I : Researchers are the faculties of Tolani Institute of Management Studies, Adipur, Kachchh. This survey is being conducted by the researchers for academic purpose and the information will be kept confidential. Your response on this questionnaire will enhance the quality of the research.

1. You do not trade in stock market if your astrologer advises you to do so.

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

2. Terrorist attacks make market crash, so you sell all your shares.

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

3. You select those mutual funds schemes which have outperformed the market in past.

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

4. Which of your stocks earned handsome return(according to you) in the last 6 months?

5. What do you think is the probable reason of having good return?

- a. Good analysis
- b. Good luck
- c. Any other (please specify)

6. Which of your stocks performed badly (according to you) in the last 6 months?

7. What do you think is the probable reason of bad performance?

- a. Bad analysis
- b. Bad luck
- c. Any other (please specify)

8. Will vicinity of location of a good company influence your investment decision (for eg. Welspun Gujarat, Adani Power in Kutch)?

- a. Always
- b. Sometimes
- c. Rarely
- d. Never

9. You own a stock worth Rs. 40 and the price increases to Rs. 46, in a year what would you do with the stock?

- a. Hold
- b. Sell
- c. Any other (please specify)

10. You have been given Rs. 100000. You have to choose between 2 options

- a. Certain gain of Rs.50000
- b. A chance to flip a balanced coin. If the coin shows head up, you will get Rs. 100000, on the other hand if the coin showed tail up you will get nothing

11. You have been given Rs. 200000. You have to choose between 2 options

- a. A certain loss of Rs.50000
- b. A chance to flip a balanced coin. If the coin shows head up, you will lose nothing, on the other hand if the coin showed tail up you lose Rs. 100000

12. You happen to be in 'Kaun Banega Crorepati' and you win Rs 100000. What you will do with this money?

Personal Details:

13. Do you invest in IPOs?

- a. Yes
- b. No

Name: _____

14. If yes, you invest in IPOs for:

- a. Listing Profits
- b. Long Term Investment

Age (Please tick):

18 30 years

31 45 years

46 60 years

15. Did you invest in Reliance Power IPO?

- a. Yes
- b. No

Above 60 years

Gender: Male / Female

16. If yes, you decided to invest in Reliance Power IPO because of:

Educational Qualification

- a. Good company prospects
- b. Advice of experts
- c. Any other (please specify)

Occupation:

Service

Business

17. Consider this bet. You toss a coin, if it shows head, you will win Rs. 100. If it shows tail, you will lose Rs. 100.

Profession

Any other (Please specify)

Case I: Suppose you won Rs. 500 in five such tosses, would you try for the 6th time? (Yes/No)

Give reasons

Monthly household income (Please tick):

Below Rs. 30,000

Rs. 30,000 to Rs. 60,000

Rs. 60,000 to Rs. 100,000

Above Rs. 100,000

Case II: Suppose you have lost Rs. 500 in five such tosses, would you try for the 6th time? (Yes/No)

Averagely, how many times do you transact in the stock market in a year: _____

G i v e reasons _____

Most of the times, you invest in the stock market for:

18. You own a share worth Rs. 2000 and the price increases to in a year Rs. 2300, what would you do with the stock?

Short term

Medium term

- a. Hold
- b. Sell
- c. Any other (please specify)

Long term

Researchers are thankful to the respondents for sparing their valuable time.

Annexure II : Volatility of a major index (Sensex) in India from 2000-2008

- ₹ 6000, Feb.11, 2000: IT boom
- ₹ 7000, June 20, 2005: Settlement between Ambani brothers
- ₹ 8000, September 8, 2005: Huge buying by foreign investors.
- ₹ 9000, November 28, 2005: Huge buying by foreign investors and consequently herding by domestic investors.
- ₹ 10000, Feb. 6, 2006
- ₹ 11000, Mar. 21, 2006
- ₹ 12000, April 20, 2006
- ₹ 13000, Oct.30, 2006. It took 135 days to reach 13000 from 12000.
- ₹ 14000, Dec. 5, 2006. It took 36 days for the sensex to move from 13000 to the 14000 mark.
- ₹ 15000, July 6, 2007: It took seven months for the sensex to move from 14000 to 15000.
- ₹ 16000, Sept.19, 2007: It took 53 days to reach 16000 from 15000.
- ₹ 17000, Sept.26, 2007: It took 7 days to reach another 1000 points up.
- ₹ 18000, Oct.09, 2007: It took just 8 days to travel from 17000 to 18000.
- ₹ 19000, Oct. 15, 2007: The index gained the last 1000 points in just four trading days.
- ₹ 20000, Oct.29, 2007: Ten trading days to gain more 1000 points.
- ₹ 21000, January 8, 2008: It took 49 trading sessions to reach 21000 from 20000.

How far EMH will explain this? Will fundamentals of the companies and economy change in few days? (Economic Times, a financial daily during 2000-2008)

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The Drucker Difference

What the world's Greatest Management Thinker Means to Today's Business Leaders

Edited by : **Craig Pearce, Joseph Maciariello and Mideki Tamlwavi**

Reviewers :

Suresh Lalwani

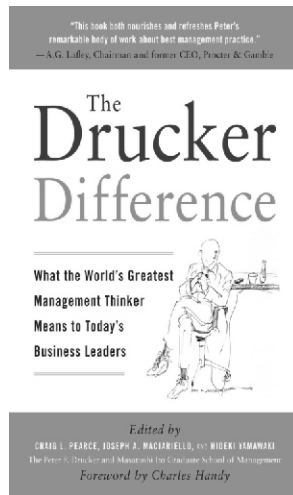
Sandip Trada

This book is a celebration of Peter F. Drucker's work of lifetime. The book is actually the contents of a course taught on ideas of Drucker at the Peter F. Drucker and Masatoshi Ito Graduate School of Management, Claremont University, California.

The book is more of an inspiration and a challenge to our learning and teaching. It contains Drucker's innovative ideas on management along with the individual research of the 16 professors who taught the course.

Peter F. Drucker has been described as a management thinker with humanistic theory of management and government, a view of organizations as if people matter. With the broad understanding of history, art and all human disciplines, not just of business, made him so interesting to so many people for so long.

The foreword by Charles Handy declares how the book that is co-authored by 16 Drucker faculty members, is the result of a spontaneous



conversation that came out of a typical Drucker School faculty meeting in spring 2007, where a group of professors unanimously decided to develop a much-needed groundbreaking academic course together, one that builds upon and honors the intellectual foundations that Peter Drucker had laid out in his teachings - a truly interdisciplinary approach to management in the business world as we know it.

And so, an entirely new academic class titled the "Drucker Difference" was born. A 14-week course co-taught by Drucker faculty and visiting professors, who each taught one class per week based on Drucker's philosophy and writings, extending these ideas through each professor's own work. The course embodies Drucker's living legacy, and The Drucker Difference book captures the essence of this course.

In the very first article on Management as a Liberal Art, Karen and Joseph discuss how America faced severe problems of bankruptcy and downturn in economy in late 2008 and early 2009. It seems that something is drastically amiss in the boardroom of America like wrong leaders, poorly trained people or executives or high salaries of executives or loss of human values. As Drucker is quoted - "Management is a liberal art that involves foundation in values, virtues and character

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formation." The liberal arts can bring wisdom and self-knowledge to the practice of management while management can be such a discipline and a practice through and in which humanities should acquire recognition, impact and relevance. Executive should be preferred who possess integrity and good morals judgment over those who are more intellectually gifted but who lack in integrity and character. As the latter ones may destroy people of the enterprise compared to the former who perform poorly. Concluding the article, they mention that management as a liberal art offers the hope of aligning values of business with those of individuals and of the broader society. Organization is the key to align individuals and societal values and has the responsibilities to the common wealth.

In the second article, Ira Jackson discusses: Drucker on Government, Business and Civil Society. The author extends Drucker's thought that Government is the central institution in the society and the organization. Therefore, it should express the common will and vision enabling each organization to make its own best contribution to society and citizen. Government is the most important contributor to create and sustain a responsible society. The role of the government needs to be strong and vigorous now more than ever, where business should contribute through engine of innovation to society not just to shareholders but also by philanthropic deeds that fund society. Government should enable the organization in the private and non-profit sectors to flourish effectively and to provide balance and bailout for society. Government needs to govern, business needs to innovate and the society needs to flourish and be encouraged. Each sector needs to act according to its role in society. Concluding the article, the authors declare that Government should ensure safety by basically conducting the affairs of the society. And business should create and innovate by which society can achieve

measurable results. While Non-profit organization can engender community by expressing interdependence through voluntary action and local initiative.

In the fourth article titled Value Based Management: Corporate Social Responsibility Meets Value Based Management, James Wallance studies Drucker's philosophy about the goal of the firm. Economists have difference of opinion about the goal of the organization. Some believe that organizations should focus on financial part because of maximizing the value of shareholders where others believe in value based management (VBM) approach. VBM theory positions that firms have multiple stakeholders, each of them is important and the needs of them should be balanced. Rather than looking at the debate as a case of one side being right and one side being wrong, firm has to take a place somewhere in the middle of the path i.e. value based management. The author concludes by saying that values and not profit motive will make a business organization survive for a longer duration.

In the fifth article titled "Drucker on Corporate Governance", Cornelis Kluyver discusses Drucker's concern over the corporate governance issue on which he wrote for the first time in 1976. Kluyver has summarized Drucker's ideas on how the director independence increases the quality of board insight and lessens the possibilities of damaging conflicts of interest. Also, how governance differs from management is discussed by emphasizing that the former is the function of board and latter of the executives. Governance is concerned with adding value to the shareholders and other stakeholders which is essentially different from management function of overseeing the performance of the entity. Ultimately Kluyvner ends the article suggesting how Drucker will react to corporate governance in the present day scenario and

presents few of his ideas of how greed and corporate culture have a pervasive influence on decisions and how erosive has capitalism become.

The sixth article by Richard Ellsworth focuses on Drucker's ideas on "Corporate Purpose". The article declares that the philosophy of corporate purpose brings meaning to the organization and so purpose of the entity must be chosen wisely. Drucker's idea of serving the commonwealth is highlighted with purpose in specific being as: to create a customer. Ellsworth argues on alternative purposes. He argues that a purpose that balances all stakeholders' interest is a vague proclamation and cannot be achieved. Even being employee focused in the purpose is exclusively internally focused and encourages politicization. Also, being shareholder focused is incorrect as shareholders are not always concerned with managing the enterprise and earnings. Ellsworth concludes the article emphasizing that the responsibility of creating and achieving the purpose of the organization is that of an effective leader who can motivate people and create an end through them. If people are led poorly, they will be the source of increasing personal alienation and frustration. Ultimately the choice of the corporate purpose defines the difference.

In the seventh article titled: Strategy for what purpose?, Vijay Sathe broods upon the thought of how strategy integrates the various functional perspectives of a business and takes a holistic view of what the firm is trying to achieve and how it can perform better than competitors. Strategy guides everyone in the organization about what to do and how to align the objectives with the strategy to create competitive advantage. Many a times, managers' formulate the strategy but fail to understand that the basic purpose of the enterprise is not to maximize the shareholders'

value but to serve customers and stakeholders. Closing the article, Vijay presents an argument that the strategist should understand the basic POSE framework i.e. Purpose, Objective, Strategy and Execution; for understanding, analyzing and executing strategy in any enterprise to achieve best possible results.

In the eighth article titled "The Twenty-first Century: The Century of the Social Sector", Sarah Smith Orr highlights the contribution of Drucker in the social movement in and around U.S. Sarah claims that Drucker was the one who transformed and renamed the non-profit sector as social sector. It was once claimed by Drucker that neither the government nor the business sector would 'save' the society. The ideas like social sector should also function as a business model and that they too should identify their 'customer' were pragmatic. Social entrepreneurs are the only change agents that could transform the society by creating new industries, new solutions to social problems and then implement them on large scale. Sarah then describes two companies who have excellently delivered social service by adopting business like model. Concluding, Sarah discusses the importance of strategic and effective leadership that helps in transforming social sector into an innovative sector. The article also argues that the government can be a partner for growth and development of social sector but is not solely responsible for it.

In the ninth article titled "Economic Environment, Innovation, and Industry Dynamics", Hidei Yamawaki declares the thought given by Drucker that the greatest mistake that managers may make is to predict the future as most of us are not equipped with such a supernatural ability. Apart from discussing the Porter's Five Forces Competitive Analysis framework, Yamawaki divides environment components as national, global and industrial environment. He manages to

descriptively list the elements of all three environment components. Hidei quotes the example of PC industry and how its industrial environment has changed and brought a challenge to the PC makers. He then moves the focus of discussion on Japan and compares it with the World War II situation of Germany and the now situation with China. Yamawaki stresses that it is important to determine the changes in the basic conditions and the market structure of the industry. Shifting his focus to global environment, he mentions that the Schumpeterian model of innovation and entrepreneurial talent is the prime mover of economic frontier. Concluding remarks emphasize that the task of manager is to manage what is there and to work to create what could be and should be.

The tenth article "A Pox on Charisma: Why Connective Leadership and Character Count", Jean Lipman-Blumen discusses how charismatic leadership is dangerous for the leaders. It makes them inflexible, convinced of their own fallibility and unable to change. On many occasions, Drucker expressed that he didn't believe in leadership and wanted to separate 'management' from the shadow of 'leadership'. Jean also points out that under no circumstances can charisma be a substitute of performance, exemplary behavior, tolerance and performance standards and values. Charismatic leaders are popular because of their charm and influence while connective leadership is whereby the leader demonstrates the importance of every member in the group by building faith, trust and interdependence. Jean further takes leadership by divorcing it from charisma and concludes that it is 'connective leadership' that builds on character and its companionships like integrity, authenticity, accountability, trust and performance which will make leaders efficient and effective.

Other topics discussed in the book include leading knowledge workers, knowledge worker productivity and practice of self-management, labor markets and human resource management, Drucker vision and its foundations, a closer look at pension funds and presenting Peter Drucker as a Humanist Economist.

The book is a must read for both the students and the teachers of management. The book reaffirms Drucker as a true management guru who has left the absolute legacy of his unmatched dexterity of thoughts that has widen horizons of management as a interdisciplinary subject rather than a functional approach for managing organizations.

GUIDELINES FOR AUTHORS

1. Format & Style

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

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

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