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Contents

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Capital Market Reforms and Investors' Satisfaction
A Study of Retail Investors of Punjab

NEERAJ MAINI AND SANJEEV SHARMA

The present study is an effort to analyze the satisfaction level of retail investors in relation to number of capital market reforms taken by Govt. and SEBI from time to time in the post liberalization period. The study is based on primary data collected through the random sample of 500 general and sophisticated investors of Punjab spread over 5 major urban and semi urban cities. The study found that the investors seemed to be quite satisfied with the SEBI's guidelines in relation to the capital market regulatory measures but on the other hand they have also showed their dissatisfaction in relation to some of them .

Introduction

A well organised and well regulated capital market facilitates sustainable development of the economy by providing long term funds in exchange for financial assets to investors. Indian capital market is one of the oldest and largest capital markets of the world. A package of reforms consisting of measures to liberalize, regulate and develop the securities market is being implemented since early 1990s. Innovative initiatives like establishment of SEBI, screen - based trading and establishment of I.T. backed NSE, depository services, rolling settlements, internet trading and derivatives trading are some which placed the stock market at the forefront of modern capital markets of the world.

Review of Literature

Gupta (1987) found that lack of infrastructure needed for facilitating share transactions considered as the major factor for the very meagre share of small towns in the country's shareholding population. Gupta (1991) revealed the dissatisfaction of the shareowners with the standard of service and information provided to them by the companies and stock brokers and with the mechanism for redressing their grievances. Charumati (1994) recommended for regulating statutes for investor protection, investor complaints, investors' associations and investor grievances. Shukla (1995) concluded that to provide investor protection,

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SEBI should play an active role in condemning the ills that affect the securities industry. Study strongly recommended for educating the small investors about their rights.

SEBI –NCAER (2000) pointed out the lack of easy access to market, inadequacy of the market infrastructure, problems in locating the right intermediary, lack of guidance and advice as the major factors inhibiting the households from investing in the secondary market . Gupta and others (2001) found that despite the capital market reforms made, the primary market was considered as risky place than the secondary market by majority of investor households. Gupta and Others (2005) revealed that the design of Indian stock market, no doubt is impressive from technological view point but is attractive to speculators and market operators also. It is able to garner only a pitiable portion of the household savings as it is characterized by too much volatility and manipulated informations. Kumar and Raju (2006) revealed that in spite of market reforms and regulatory measures initiated by those at the helm of affairs, many investors continue to suffer several difficulties from a multitude of elements involved in the capital market. Gupta and Jain(2008) pointed out 'too much volatility', 'too much price manipulation', 'unfair practices of brokers' and 'corporate mismanagement and frauds' as the main worries of investors.

Objectives of the Study

The present study has been conducted to analyse the effectiveness of capital market reforms from the retail investors point of view. The specific objectives of the study are:

- To study the effectiveness of capital market reforms.
- To study the satisfaction level of retail investors of Punjab in relation to capital market reforms taken by SEBI

Methodology

The study is purely based on primary data which was collected through the random sample of 500 investors spread over 5 major urban and semi urban cities of Punjab i.e. Amritsar, Jalandhar, Ludhiana, Gurdaspur and Ferozepur. Data was collected with the help of a well structured questionnaire. An attempt was made to select the respondents with various socio – economic characteristics to make the sample representative. 500 questionnaires were distributed to the investors, but on repeated requests and personal visits only 372 were received back, out of which 15 were found to be incomplete and hence rejected.

For the purpose of analyzing the Primary data related to the satisfaction level of investors in regard to capital market reforms statistical techniques viz. Weighted Average and ANOVA have been used. In practice, when some of the items are more important than others, in such cases, proper weightage is to be given to various items, the weights attached to each item being proportional to the importance of the item in the distribution and then the weighted average is calculated by dividing

the weighted sum with sum of the weights. To find out the effect of education, occupation and age of the investors on their decision making related to capital market One Way ANOVA has been applied.

Personal Profile of Sample Population

Satisfaction level of the investors may vary from each other, therefore it is necessary to know about the personal profile i.e. age, educational qualification and occupation of the investors before reaching at any conclusion.

Age: For analysis point of view respondents are divided into 3 groups on age basis. Table 1 shows that 52.7% of respondent investors have been falling in the age group of 20 to 40 years, 38.9% of the respondent investors were of the age group of 40 to 60 years and only 8.4% of the respondent investors were falling in the age group of over 60 years. Hence, it can be concluded that majority of the investors were young investors ready to learn more as well as ready to take more risk than the higher age group.

Table 1: Profile of the respondents

	Number of Respondents	Percentage
Respondent age group		
20Yrs.—40Yrs	188	52.7
40Yrs.—60Yrs	139	38.9
Over 60 Yrs	30	8.4
Total	357	100.0
Educational qualification		
Professional	52	14.6
Post- Graduates	128	35.9
Graduates	143	40.0
Under Graduates(E4)	34	9.5
Total	357	100.0
Respondents' occupation		
Bankers	55	15.4
CAs/CS/CWAs	8	2.2
Academicians	59	16.5
Insurers	51	14.3
Businessman	132	37.0
Others/ Financial Consultants	43	12.0
House-Wives	9	2.5
Total	357	100

Educational Qualification: Table 1 shows that maximum respondents were educated and qualified. 14.6% of the respondents were professionally qualified, 35.9% were post graduate, 40% were the graduates and only 9.5% of the respondents were under graduates. It shows that majority of respondent investors are qualified persons who smartly handle their financial resources.

Respondents' Occupation : Table 1 shows that 15.4% of respondents were the Bankers. 2.2% were CAs/ CS / CWAs, 16.5% of the respondents were Academicians, 14.3% were working in the Insurance sector. Majority of the respondents were running their own business, 12% were either financial consultants or were in any other occupation. A very few respondents i.e. 2.5% did not respond, when contacted they were found to be the housewives. It can be concluded that majority of the respondent investors are educated and qualified.

Results and Discussion

An analysis of the responses shown in Table 2 explains that out of 357 respondents, a vast majority of respondents (81.2%) are found to be satisfied with the number of regulatory measures related to capital market in India with weighted average score (WAS) of 1.15, out of which 29.7% of the respondents found to be highly satisfied, 10.1% of the respondents found to be neither satisfied nor dissatisfied and there are only 2.8% of the investors who are found to be dissatisfied with the capital market regulatory measures.

When asked about different regulatory measures related to capital market, a considerable number of investors i.e. 72% with WAS of 1.06 found to be satisfied with the T+2 rolling settlement system, out of which approximately 20% were highly satisfied whereas 10.4% were neither satisfied nor dissatisfied, only 2% of the respondents were found to be dissatisfied and a very meagre number of respondents i.e. 0.3% were found to be highly dissatisfied. But again there were respondents (app.) 15.4% who were not found to be aware of this regulatory measure which again may be due to the fact that they deal in the capital market through the professionals.

A majority (75%) of investors found to be satisfied with measures related to Depositories' behaviour with WAS of 1.02, whereas 20.7% of investors are found to be highly satisfied with this measure. 14% of investors are neither satisfied nor dissatisfied, only 2.5% of the investors are found to be highly dissatisfied with Depositories' behaviour whereas 8.4% of the investors are not aware of this reforms asure which indicates that still there is a significant number of investors who make investment through some other people or intermediaries.

Regarding Book Building method of share issues 65% of the respondents with WAS of 0.99 were found to be satisfied whereas the majority of investors i.e. 23% ranked this reform measure at the first level of satisfaction which reveals that they are highly satisfied with this

Table 2: Satisfaction level of investors regarding reform measures taken by SEBI

Variables / Reformal Measures	Highly Satisfied No.	Satisfied No.	Neither Satisfied Nor Dis-satisfied No.	Dis-satisfied No.	Highly Dis-satisfied No.	Not Aware No.	TOTAL WAS
RegulatoryMeasures Related to Capital Market	106(29.7)	184(51.5)	36 (10.1)	10 (2.8)	-	21 (5.9)	1.15
T+2 Rolling Settlement System	72 (20.2)	185(51.8)	37 (10.4)	7 (2.0)	1 (0.3)	55 (15.4)	1.06
Depositories' Behaviour	74 (20.7)	194(54.3)	50 (14.0)	9 (2.5)	-	30 (8.4)	1.02
Book Building Method of Share Issues	82 (23.0)	151(42.3)	61 (17.1)	8 (2.2)	3 (0.8)	52 (14.6)	0.99
Guidelines for Protection of interest of Investors	77 (21.6)	167(46.8)	42 (11.8)	20 (5.6)	3 (0.8)	48 (13.4)	0.95
DIP Guidelines	56 (15.7)	119(33.3)	57 (16.0)	6 (1.7)	-	119(33.3)	0.94
GrievancesRedressal System of SEBI	63 (17.6)	146(40.9)	75 (21.0)	16 (4.5)	2 (0.6)	55 (15.4)	0.83
Brokers'Behaviour With Investors	65 (18.2)	191(53.5)	41 (11.5)	31 (8.7)	6 (1.7)	23 (6.4)	0.83
Norms for Insider Trading	44 (12.3)	94 (26.3)	56 (15.7)	23 (6.4)	7 (2.0)	133(37.3)	0.65
SEBI's actions against Defaulting Companies	55 (15.4)	118(33.1)	66 (18.5)	56(15.7)	7 (2.0)	55 (15.4)	0.52

(Figures in parenthesis show percentage)

measure of SEBI, only 2.2% of the investors were found to be dissatisfied, 0.8% as highly dissatisfied whereas, 17.1% of the investors were those who were neither satisfied nor dissatisfied with this measure. But like other reforms there were 14.6% of investors who were not aware of this reform measure.

SEBI issues guidelines from time to time for the protection of interest of investors, the respondents were asked about their satisfaction level in regard to this reform measure. Majority 68.4% of the investors with WAS of 0.95 were considered to be satisfied with this measure, of which 21.6% seemed to be highly satisfied, only 0.8% of the respondents ranked this measure at highly dissatisfaction level. 5.6% of the investors were found to be dissatisfied, 11.8% as neither satisfied nor dissatisfied and 13.4% of the investors were not aware of this reform too.

For the timely and full disclosure of the information SEBI has issued DIP guidelines for the disclosure of information and protection of investors. Therefore, the respondents were asked to rank it at their satisfaction level. 48% of the respondents ranked this measure at the just satisfaction level, while 15.7% of the investors ranked it at the highly satisfaction level, only 1.7% of the respondents ranked it at the dissatisfaction level, 16% considered to be neither satisfied nor dissatisfied but there was not even a single respondent who ranked it at the highly dissatisfaction level. A considerable number of respondents 33.3% similar to the other reforms were not found to be aware of DIP guidelines.

Surveillance mechanism has been installed by SEBI for the speedy redressal of grievances of the investors. A considerate number of investors 58% with WAS of 0.83% were found to be satisfied with these measures, 17.6% found to be highly satisfied, only 0.6% of investors were highly dissatisfied with this measure whereas, 4.5% were dissatisfied, 21% of the investors were neither satisfied nor dissatisfied and 15.4% of the investors were those who were not aware of this measure. Since number of investors were not found to be aware of the different reform measures taken by SEBI which means that they may deal in the capital market through brokers.

Number of measures have been taken by SEBI for the regulation of Brokers, regarding their licensing, brokerage and training etc. A vast majority 71.7% of respondents with WAS of 0.83% considered to be satisfied with the Brokers' behaviour whereas out of which 18.2% were highly satisfied, 1.7% highly dissatisfied, 8.7% dissatisfied, 11.5% neither satisfied nor dissatisfied and 6.4% of the investors were those who were not aware of this even, which implied that they did not even invest through Brokers directly.

Illegal trading on the basis of non-public price sensitive information and using confidential information to make a profit or avoid a loss at the expense of others co-investors is another cause of great concern in the Indian securities market. SEBI has made number of amendments

in the laws related to Insider trading since 1990s but even then cases related to market manipulation are increasing day by day. In relation to this only 38.6% of investors with 0.65 of WAS were found to be satisfied with the reform measures related to Insider trading, out of which 12.3% of investors were highly satisfied, 6.4% were dissatisfied, only 2% were highly dissatisfied, 15.7% were neither satisfied nor dissatisfied whereas, a large number 37.3% of the investors were not aware of this reform measure.

In context to the satisfaction level of investors, they were asked about the SEBI's action against defaulting companies, 48.5% of the investors with WAS of 0.52 considered themselves satisfied whereas, 15.4% considered as highly satisfied, 18.5% were neither satisfied nor dissatisfied while only 2% of the respondents were those who considered themselves as highly dissatisfied and 15.4% were not aware of this reform measure.

Analysis on the basis of Education, Occupation and Age: Investors' satisfaction about SEBI's guidelines related to capital market has also been analysed on the basis of education, occupation and age. Tables 3, 4 and 5 gives education wise, occupation wise and age wise analysis of the satisfaction level of the investors regarding capital market reforms in India. While analyzing the Table 3 on education basis, all the investors seemed to be just satisfied with the regulatory measures related to capital market whereas E4 group of investors consider themselves as highly satisfied (WAS = 1.97) with these measures. On the basis of satisfaction level regarding individual reform measures E4 group of investors give somewhat different results than others by ranking T+2 rolling settlement system at the neither satisfied nor dissatisfied level whereas, all other investors irrespective of their education level ranked it at the satisfaction level, by ranking measures for norms for insider trading (WAS= 0.42) and SEBI's actions against defaulting companies (WAS= 0.35) like E3 (WAS = 0.36) at the dissatisfaction level. All other reforms are ranked at almost same level, with a little difference by all the groups of investors irrespective of their education level. ANOVA test applied within groups and between groups gives significant values regarding regulatory measures related to capital market in India, DIP guidelines and SEBI's action against defaulting companies which means that there is significant correlation between the respondents of the different education level and these reforms but ANOVA shows insignificant results regarding other reforms which reveals that there is insignificant correlation between the respondents belonging to different education groups and these reforms.

Occupation wise analysis as shown by Table 4 reveals that certain differences exist in the satisfaction level of the investors with the different occupation groups but O2 group of investors show sharp differences with the other groups. They found to be dissatisfied with many reform measures like T+2 rolling settlement system (WAS= 0.25), Book Building method of share issues (WAS = 0.13), Brokers'

Table 3: Education wise satisfaction level of investors regarding reform measures

Variables / Reform Measures	E1 WAS	E2 WAS	E3 WAS	E4 WAS	Total WAS	F- Value Value	Significant
RegulatoryMeasures Related to Capital Market	1.35	1.07	1.18	1.97	1.15 N= 336	2.596, V1=3 V2=332	.052
T+2 Rolling Settlement System	1.16	1.05	1.06	0.88	1.06 N=302	.889, V1=3 V2=298	.447
Depositories' Behaviour	0.98	0.92	1.13	1.04	1.02 N=327	1.906, V1=3 V2=323	.128
Book Building Method of Share Issues	1.00	1.06	0.91	0.96	0.99 N=305	0.636, V1=3 V2=301	.592
Guidelines for Protection of interest of Investors	1.04	0.91	0.96	0.96	0.95 N=309	.287, V1=3 V2=305	.835
DIP Guidelines	1.20	0.83	0.93	1.00	0.95 N=238	2.552, V1=3 V2=234	.056
GrievancesRedressal System of SEBI	0.98	0.75	0.90	0.58	0.83 N=302	1.823, V1=3 V2=298	.143
Brokers'Behaviour With Investors	0.92	0.79	0.81	0.94	0.83 N=334	.411, V1=3 V2=330	.745
Norms for Insider Trading	0.76	0.62	0.68	0.42	0.65 N=224	.558, V1=3 V2=220	.643
SEBI's actions against Defaulting Companies	0.78	0.36	0.61	0.35	0.52 N=302	2.473, V1=3 V2=298	.062

Table 4: Occupation wise satisfaction level of investors regarding reform measures

Variables / Reform Measures	Oo WAS	O1 WAS	O2 WAS	O3 WAS	O4 WAS	O5 WAS	O6 WAS	Total WAS	F-Value WAS	Sign
RegulatoryMeasures Related to Capital Market	1.33	1.20	0.50	1.18	1.24	1.07	1.24	1.15 N=336	1.738 V1=6 V2=329	.111
T+2 Rolling Settlement System	1.25	1.13	0.25	1.15	1.12	0.93	1.26	1.06 N=302	3.485 V1=6 V2=295	.002
Depositories' Behaviour	1.11	0.96	0.63	0.96	1.24	1.06	0.82	1.02 N=327	2.022 V1=6 V2=320	.062
Book Building Method of Share Issues	1.38	1.22	0.13	1.07	0.98	0.91	0.92	0.99 N=305	2.823 V1=6 V2=298	.011
Guidelines for Protection of interest of Investors	1.50	1.02	0.63	1.07	1.02	0.87	0.81	0.95 N=309	1.371 V1=6 V2=302	.226
DIP Guidelines	0.50	0.85	0.67	0.70	1.08	1.09	1.03	0.95 N=238	2.152 V1=6 V2=231	.049
GrievancesRedressal System of SEBI	0.88	0.98	0.57	0.68	1.13	0.74	0.81	0.83 N=302	1.842 V1=6 V2=295	.091
Brokers'Behaviour With Investors	1.22	0.85	0.38	0.73	0.96	0.94	0.43	0.83 N=334	2.611 V1=6 V2=327	.017
Norms for Insider Trading	-0.60	0.33	0.17	0.56	0.91	0.78	0.82	0.65 N=224	3.093 V1=6 V2=217	.006
SEBI's actions against Defaulting Companies	0.14	0.54	0.25	0.46	0.75	0.55	0.30	0.52 N=302	2.473 V1=6 V2=295	.506

behaviour with investors (WAS = 0.38), Norms for Insider trading (WAS =0.17) and SEBI's action against defaulting companies (WAS= 0.25) whereas all other groups found to be either satisfied or neither satisfied nor dissatisfied. ANOVA applied too gives significant results for the reform measures like T+2 rolling settlement system, Depositories' behaviour, Book-Building method of share issues, DIP guidelines, Grievances redressal system of SEBI, Brokers' behaviour with investors and Norms for Insider trading. It reveals that as regards the satisfaction level of investors, it varies significantly i.e. different occupational groups have varied satisfaction level from each other.

Age wise analysis as indicated by table 5 shows that A3 group of investors hold the strong level of satisfaction and dissatisfaction. They found to be highly dissatisfied with the reform measure of SEBI in relation action taken by them against defaulting companies (WAS = -0.40), dissatisfied with Norms for Insider trading (WAS = 0.00). ANOVA results give the significant values for DIP guidelines, Norms for Insider trading and SEBI's action against defaulting companies which reveals that satisfaction level of investors varies significantly on the basis of age in relation to these reform measures i.e. investors with different age groups have varied satisfaction level from each other for these reform measures only. ANOVA applied between the groups and within the groups for all other reform measures does not vary significantly which means that satisfaction level does not vary from each other. All the investors have the same satisfaction level irrespective of their age.

It can be said that E4 who are undergraduates, O2 who are CA's/ CS/ ICWA's and A3 who are the senior citizen investors have different satisfaction level from all other groups of investors which shows that education level, profession/ occupation and age of the investors are the very important parameters which affect the satisfaction level of investors.

Findings

The prominent findings of the study are:

- Most of the respondents are young male investors falling in the age group of 20-40 years. They are educated belonging to business class and are professional investors.
- Investors found to be quite satisfied about the SEBI's guidelines regarding capital market regulatory measures viz. T+2 Rolling Settlement System, Book-Building method, Protection of their interests, Depositories behaviour and DIP Guidelines but they showed their dissatisfaction regarding Grievances Redressal system of SEBI, SEBI's action taking power against defaulting companies, Brokers' behavior and norms for Insider trading.
- Many investors found to be unaware of many reform measures.
- E4 (Under Graduate) Investors, O2(CAs/ CS/ICWAs) Investors and A3 (Senior Citizens) Investors have different level of satisfaction from all other groups of investors which shows that education,

Table 5: Age wise satisfaction level of investors regarding reform measures

Variables	A1	A2	A3	Total	F-Value	Significant Value
RegulatoryMeasures Related to Capital Market	1.20	1.07	1.07	1.15 N= 336	.586 V1=2 V2=333	.557
T+2 Rolling Settlement System	1.05	1.09	0.82	1.06 N=302	.796 V1=2 V2=299	.452
Depositories' Behaviour	1.01	1.03	1.00	1.02 N=327	.024 V1=2 V2=324	.976
Book Building Method of Share Issues	1.00	0.94	1.40	0.99 N=305	1.527 V1=2 V2=302	.219
Guidelines for Protection of interest of Investors	0.98	0.90	1.22	0.95 N=309	.774 V1=2 V2=306	.462
DIP Guidelines	1.02	0.88	0.56	0.95 N=238	2.290 V1=2 V2=235	.103
GrievancesRedressal System of SEBI	0.91	0.76	0.67	0.83 N=302	1.267 V1=2 V2=299	.283
Brokers'Behaviour With Investors	0.76	0.93	0.80	0.83 N=334	1.469 V1=2 V2=331	.232
Norms for Insider Trading	0.74	0.58	0.00	0.65 N=224	2.395 V1=2 V2=221	.094
SEBI's actions against Defaulting Companies	0.55	0.56	-0.40	0.52 N=302	3.987 V1=2 V2=299	.020

occupation and age of the investors are very important parameters which affect the satisfaction level of investors.

- On the whole, the respondents seem to be satisfied with the effectiveness of the capital market reforms.

Conclusion

On the basis of above discussion it can be concluded that a large number of investors seemed to be satisfied with the reform measures taken by SEBI, but on the other hand a considerate number of investors also seemed to be not aware of many of the measures. Therefore, it can be inferred that there is a need of educating the investors with these measures. To permit a growing number and

proportion of Indian families to participate more directly in and enjoy the benefits of the expanded market economy, it will be necessary to build knowledge of the market and to establish trust and confidence in its fairness.

REFERENCES

Bajpai, G.N., Chairman ,SEBI. 2003. Significance of securities market in the growth of an eccnomy: An Indian context, accessed from www.nseindia.com as on 30th oct. 2007

Charumati, B. 1994. Hapless investors groan in scanty protection (ed), in Vinayakam N; A profile of Indian capital market ,Kanishka Publishers and Distributors, New Delhi.

Gupta, L. C. 1991. Indian Shareholders- A survey, society for capital market research and development, New Delhi.

Gupta L.C., Jain, Naveen & Gupta, C.P. 2001. Indian households' investment prefrences – the third all India investors' survey, conducted by society for capital market research and development.

Gupta L.C., Jain, Naveen & Chaudhury. 2005. Indian household investors survey 2005, sponsored by Ministry of Company Affairs, Investor Education and Protection Fund, Govt. of India, conducted by Society for capital market research and development, New Delhi.

Gupta L.C. & Jain, Naveen. 2008. The changing investment preferences of Indian households survey 2008, conducted by Society for Capital Market Research and Development, New Delhi.

Indian Securities Market Review. 2006. A Publication of NSE.

Kumar Daleep, P.M. and Raju, G. 2006. Grievances of investor in Indian capital market, *The Management Accountant*, July, p. 48-55.

Madhumathi, R. 1997. Risk perception of investors, in Madhusoodnan, T.P; Indian capital markets: theories and empirical evidence, Quest Publications, Mumbai.

Nayak, Jogendra & Dass Chander Subash. 2007. Investor grievances and protection, *The Management Accountant*, January, p.48-55.

National Institute of Securities Markets. 2007. Deepening India's capital market: the way forward accessed on 24th March.

SEBI — NCAER Survey. 2001. Accessed from www.nseindia.com as on 20th January.

SEBI- NCAER Survey. 2007. Accessed from www.nseindia.com as on 10th September, 2008.

Shah, Ajay. 1997. Institutional changes in India's capital markets, 1998.

Shah, Ajay and Thomas Susan. 2001. Policy issues in the Indian securities market, 2001.

Shanmugham R. and Muthuswamy, P. 1997. Decision process of individual investors. As quoted in Madhusoodanan, T.P. (edt). Indian capital markets: theories and empirical evidence, Quest Publications, Mumbai.

Shukla, M.B. 1995. Investors' protection and disclosure practices in India, in Lalwani, J.S: Security market in India, Book Treasure, Jodhpur.

Subha, M.V. 2006. Indian capital markets – a road ahead , *Indian Journal of Marketing*, March, pp.21-22.

The Institute of Chartered Financial Analysts of India. 1998. Comprehensive legislation for securities market, *CFA Newsletter*, ICFAI, Hyderabad, August.

Vinayakam, N. 1994. A profile of Indian capital market (ed), Kanishka Publishers, New Delhi.

Impact of Index Futures on Spot Market Volatility in India

P. Srinivasan

The present article employed Vector Autoregression (VAR) model to examine the impact of futures trading on spot market volatility in India. The daily data from 12th June, 2000 through 30th April, 2009 has been considered for the analysis. The empirical results indicate that the volatility of the spot market has been declined after the introduction of futures market in India. The findings of the study are consistent with the studies for other emerging markets, like Malaysia and Italy. That is, the introduction of futures results in a reduction in stock market volatility which also supported the earlier study by Indian authors.

Introduction

The future market trading in Indian financial markets was introduced in June 2000, options index was commenced from June 2001 and subsequently the options and futures on individual securities trading was commenced from July 2001 and November 2001, respectively. Moreover, both futures and options trading on S&P CNX 100 and Nifty Junior Indices have been started from 1st June, 2007 in National Stock Exchange (NSE). The futures market trading have grown rapidly in recent times and witness maximum trading volume in futures and options segments at National Stock Exchange. The futures trading provides important economic functions such as price discovery, portfolio diversification and opportunity for market participants to hedge against the risk of adverse price movements. Hence, the introduction of futures market makes a significant influence on corresponding spot markets. The movements of the spot market price have been largely influenced by the speculation, hedging, and arbitrage activity of futures markets. Therefore, the debate on the impact of futures trading on spot market volatility has become increasingly important research issue among academicians, regulators and investors alike.

From the theoretical point of view, the impacts of futures trading on the volatility of the underlying spot markets are still controversial. One view is that introduction of futures market increases spot market volatility due to the fact that high degree of leverage benefits and low transaction costs in futures market are likely to attract larger uninformed traders. The lower level of information of futures traders with respect to spot market traders is likely to increase the spot market volatility.

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Conversely, the introduction of futures trading reduces the spot market volatility because of low cost contingent strategies and high degree of leverage benefits in futures market attracts larger speculative traders from a spot market to a more regulated futures market segments. This makes the spot market less volatile through reducing the amount of noise trading. The proponents of 'market completion' hypothesis argues that futures trading helps in price discovery, improve the overall market depth, enhance market efficiency, increase market liquidity and ultimately reduces informational asymmetries and therefore compress spot market volatility.

Review of Literature

Finglewski (1981) had examined the impact of futures trading in the Government National Mortgage Association (GMNA) by using the standard deviations of the returns. He concludes that the volatility of the underlying asset is increased after the introduction of futures markets. Edwards (1988) had investigated the impact of stock index futures trading on the underlying spot market. He employed the variance ratio F tests for the period June 1973 to May 1987. He concluded that introduction of futures trading has not induced a change in spot volatility in the long-run. The analysis also reveals that there is some evidence of futures induced short-run volatility on the expiration days of futures contracts. Harris (1989) examined the volatility effects after introduction of index futures by comparing daily return volatilities during the pre-futures and post futures between S&P 500 and a non S&P 500 group of stock controlling for differences in firm attributes. Variance regression model was employed to examine the objective. The analysis reveals that increased volatility was a common phenomenon in different markets and index futures by themselves might not be a cause.

Review of Literature Bivariate GARCH model was employed to examine the objectives. The results indicate a strong inter-market dependence in the volatility of the spot and futures returns. Further, the studies of Lee and Olk (1992) for Australia, Hong Kong, Japan and UK, Antoniou and Holmes (1995) and Butter worth (2000) for United Kingdom, Corredor Pilar and Rafael (2002) for Spain, Pok and Poshakwale (2004) for Malaysia, Ryoo and Smith (2004) for Korea, Zhong, Darrat, and Otero (2004) for Mexico, Christos Floros and Dimitrios Vougas (2006) for Greece and Vipul (2006) and Ramana Rao (2007) for India found that the inception of index futures trading had increased the volatility of underlying spot markets.

In contrast to the above studies, Bansal, Pruitt and Wei (1989) and Skinner (1989) found evidence that option trading reduces the volatility of the underlying spot markets. Bessembinder and Seguin (1992) examined the dynamic relationship between futures trading activity and spot market volatility for United States. The study employed ARIMA model to examine the objective. The analysis reveals that active futures market trading are associated with decreased rather than increased volatility of the spot market by enhancing the liquidity and depth of spot markets. Besides, Phil Holmes (1996) examined the relationship between futures trading activities and stock market volatility in United Kingdom. The GARCH model was employed to

examine the objective. The empirical results indicates that inception of futures trading has a beneficial impact on underlying spot market. Further, the recent studies of Bologna and Cavallo (2002) for Italy, Thenmozhi (2002), Nath (2003), Raju and Karande (2003), Nupur and Saikat (2004), Thenmozhi and Sony (2004), Kailash and Sham (2008) and Puja (2008) for India, Alexakis (2007), Drimbetas, Sariannidis and Porfiris (2007) and Karanthanassis and Sogiakas (2007) for Greece and Goodfellow and Salm (2008) for Poland have found that the onset of stock index futures trading had decreased the volatility of underlying spot market.

Besides, the earlier studies by Santoni (1987), Aggarwal (1988), Fortune (1989), Becketti and Roberts (1990), Baldauf and Santoni (1991) and Perieli and Koutomos (1997) for United States, Hodgson and Nicholls (1991) and Dennis and Sim (1999) for the Australian spot market, Bacha and Vila (1994) for the Japanese spot market and Illueca and Lafuente (2003) for the Spanish stock market, Shenbagaraman (2003) for the Indian stock index futures and Afsal and Mallikarjunappa (2007) for the selected scrips of Indian stock market and Spyrou (2005) for Greece stock exchange have found that there was no significant effect of the introduction of futures trading on the corresponding spot market volatility.

The above existing literatures pertaining to impact of futures trading on the underlying spot market volatility are well established. However, the results on the introduction of derivatives market were seemed to be ambiguous. The study at national level has been investigated taking the spot returns for pre-and post-futures period. Hence, there is scope for conducting a study by taking the Futures Trading Activity (FTA) with the data of spot returns which has been analysed by Kyriacou and Sarno (1999). Besides, the existing studies in Indian context employed standard deviation and ARCH family of techniques to measure spot market volatility. The present study employs GARCH (1,1) techniques for estimating spot market volatility because GARCH is expected to explain sufficiently the time varying volatility of spot market. Then the Vector Autoregressive (VAR) model had been used to investigate the relationship between spot market volatility and Futures Trading Activity in India.

Methodology

The daily closing price of S&P CNX Nifty spot index and data series on futures volume and open interest have been considered for the study. The data on futures are collected for near-month contracts as they are most heavily traded. The present study used the daily data from 12th, June, 2000 through 28th, December, 2006. All the required data information for the study has been retrieved from the National Stock Exchange (NSE) website. Returns are calculated as log of ratio of present day's price to previous day's price. The futures trading activity (FTA) is measured by the daily volume of futures standardised by open interest. FTA_t are constructed as follows:

$$FTA_t = \frac{V(FUT)_t}{OI\ (FUT)_t} \qquad \qquad ......(1)$$

Where, V (FUT) and OI (FUT) denote daily volume and open interest for futures. A generalized auto regression conditional hetroscedasticity (GARCH) model is selected as the most adequate measure of spot market volatility in the present study. These are considered as statistically reliable and consistent. The advantage of a GARCH model is that it captures the tendency in financial data for volatility clustering. Hence, a natural way to capture the time varying nature of volatility is to model the conditional variance as a GARCH process (Engle, 1982 and Bollerslev, 1986). A volatility proxy is constructed using the conditional variance of returns and h_t retrieved from the maximum likelihood estimation of a GARCH (1, 1) of the form:

$$R_t = \beta_o + \beta_1 \; R_{t-1} + \varepsilon_t \;, \varepsilon_t | \left(\varepsilon_{t-1}, \varepsilon_{t-2}, \ldots\ldots \right) \sim N(o, h_t) \qquad \ldots\ldots(2)$$

$$h_t = \alpha_o + \alpha_1 \, \varepsilon_{t-1}^2 + \alpha_2 \, h_{t-1} \qquad \ldots\ldots(3)$$

Where, equation (2) and (3) denote the conditional mean equation and the conditional variance equation respectively; a_1 and a_2 are non negative, and e_t is an error term.

The dynamic relationship between the spot return volatility and futures trading activity (FTA) is examined in the framework of a vector auto-regression (VAR) model for volatility and futures trading. Before running the VAR model, it is necessary to test the stationary of the series. Hence, the Augmented Dickey-Fuller (1979) and Phillips-Perron (1988) test are employed to infer the stationary of the data series. VAR model is the most appropriate model to examine the issue since it treats all the variables in the system to be endogenous. Each endogenous variable is explained by its lagged and the lagged values of all other endogenous variables included in the model. Usually, there are no exogenous variables in the model. Thus, by avoiding the imposition of priori restrictions on the model, the VAR adds significantly to flexibility of the model. In other words, a VAR system consists of a set of regression equations, each of which has an adjustment mechanism such that even small changes in one variable component in the system may be accounted automatically by possible adjustments in the rest of the variables. Furthermore, by incorporating the lagged term of the variables, the VAR becomes useful in capturing the empirical regularities embedded in the data. Now the model can be written as:

$$\sigma_t = \alpha_1 + \beta_{11} \sum_{i=1}^{n} \sigma_{t-i} + \beta_{12} \sum_{i=1}^{n} FTA_{t-i} + \varepsilon_{1t} \qquad \ldots\ldots(4)$$

$$FTA_t = \alpha_2 + \beta_{21} \sum_{i=1}^{n} \sigma_{t-i} + \beta_{22} \sum_{i=1}^{n} FTA_{t-i} + \varepsilon_{2t} \qquad \ldots\ldots(5)$$

where s denotes the spot market volatility measure employed; b_{11}, b_{12}, b_{21}, and b_{22} are parameters; n is chosen on standard statistical grounds; and e_{1t} and e_{2t} are the stochastic error term.

The lagged values of the right-hand side variables in the equation (4) and (5) of VAR are estimated by ordinary least squares (OLS), it executes Granger (1969) causality tests by testing for zero restrictions on subsets of lagged parameters in each equation of the VAR in order to investigate the relationship between spot return and FTAs. The lag length of n is selected using the multi-variate generalizations of Akaike information criteria (AIC) and Schwarz's criteria (SC) due to fact that the results of the test are quite sensitive to the lag length.

Results and Discussions

As a preliminary investigation, the present study tested the stationarity of the selected time series data for which Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests have been conducted and its results were presented in Table-1.

Table 1: Unit root test results

SI. No.	Variables	Intercept	With Intercept & trend	Without Intercept & trend
Augmented Dickey-Fuller Test				
Levels				
1.	Spot Market Volatility	-11.88*	-10.91*	-14.84*
2.	Futures Trading Activity	-13.22*	-12.24*	-15.17*
Phillips-Perron Test				
Levels				
1.	Spot Market Volatility	-10.14*	-9.15*	-10.11*
2.	Futures Trading Activity	-14.79*	-13.80*	-14.69*

Notes: *indicates significance at one per cent level. Optimal lag length is determined by the Schwarz Information Criterion (SC) and Newey-West Criterion for the Augmented Dickey-Fuller Test and Phillips-Perron Test respectively.

The table result reveals that Nifty spot return volatility and futures trading activities (FTA) are stationary at their levels at one percent significant level. Therefore, the stationary of the series in level justify the use of Vector Autoregression model (VAR).

The Vector Autoregression model (VAR) estimation results are presented in Table-2. Before carrying out the VAR model, it is important to ascertain an appropriate lag length so that residuals are uncorrelated and homoskedastic. Lutkepohl (1993) indicates that overfitting lag length (selecting a higher order lag length than the true lag length) causes an increase in the mean-square forecast errors of the VAR and that underfitting the lag length often generates autocorrelated errors. So the appropriate lag length is determined by Akaike information criteria (AIC) and Schwarz's criteria (SC) and it reveals that the lag length is 4 for both the series.

Table 2: Vector Autoregression (VAR) Model

Vector Autoregression (VAR) Estimation Results (Volatility measure is GARCH)		
	ó	FTA
$ó_{t-1}$	1.2330* (19.755)	-7.2791 (-0.4438)
$ó_{t-2}$	-0.3648* (-9.0314)	42.105 (1.5058)
$ó_{t-3}$	0.8298** (2.1828)	-13.353 (-0.7953)
$ó_{t-4}$	-0.0052 (-0.1892)	12.486 (0.2436)
FTA_{t-1}	0.0014 (0.09)	0.4910* (17.229)
FTA_{t-2}	0.0027 (-1.1856)	0.5580 (0.8748)
FTA_{t-3}	-0.0031** (-2.2914)	0.0829 (0.6928)
FTA_{t-4}	-0.0052* (-3.7914)	0.2543* (6.1945)
C	9.43E-05* [3.2370]	0.0313* (3.8153)
F-statistic	1076.94*	394.10*

Notes: Optimal lag length was determined by the Akaike information criteria (AIC) and Schwarz Information Criterion (SC), ó and FTA are Nifty spot return volatility and Futures Trading Activity respectively, * and ** denote the significance at the one and five per cent level, respectively.

The results reveal that the futures trading activities (FTAs) influence to the Nifty spot volatility returns. In the three and four lags of FTA, the coefficient is statistically significant at five percent and one percent levels. The significantly negative estimated coefficients on the lag values of FTA suggest that greater futures trading in previous days reduce volatility of Nifty spot return. The volatility in the spot market has been declined after the introduction of futures market in India. This finding is consistent with the studies for other emerging markets, like Malaysia and Italy. That is, the introduction of futures results in a reduction in stock market volatility which also supported the earlier studies by Nath (2003), Raju and Karande (2003), Nupur and Saikat (2004) and Thenmozhi and Sony Thomas (2004) for the Indian stock market. The results concludes that futures market enhances the overall market depth, increases market liquidity and ultimately reduces informational asymmetries and therefore compresses spot market volatility in India.

Conclusion

The paper examined the relationship between Nifty spot volatility and futures trading activity in India. It empirically evaluated the impact of introduction of futures trading on spot market volatility through Vector Autoregression (VAR) model. The result indicates that the volatility in the spot market has been declined after the introduction of futures market in India. This finding is consistent with the studies for other emerging markets, like Malaysia and Italy. That is, the introduction of futures results in a reduction in stock market volatility which also supported the earlier studies by Nath (2003), Raju and Karande (2003), Nupur and Saikat (2004) and Thenmozhi and

Sony (2004) for the Indian stock market. The results concludes that futures market enhances the overall market depth, increases market liquidity and ultimately reduces informational asymmetries and therefore compresses spot market volatility in India.

REFERENCES

Afsal, E.M. and Mallikarjunappa, T. 2007. Impact of stock futures on the stock market volatility. *The ICFAI Journal of Applied Finance,* 13(9): 54-75*.*

Aggarwal, R. 1988. Stock index futures and cash market volatility. *Review of Futures Market*, 7(2): 290-299.

Alexakis, P. 2007. On the effect of index futures trading on stock market volatility. *International Research Journal of Finance and Economics*, 11: 7-20.

Antoniou, A. and Holmes, P. 1995. Futures trading, information and spot price volatility: evidence for the FTSE-100 stock index futures contract using GARCH. *Journal of Banking & Finance*, 19(1): 117-129.

Bacha, Obiyathulla and Anne Fremault Vila. 1994. Futures markets, regulation and volatility: the case of the Nikkei stock index futures markets. *Pacific-Basin Finance Journal*, 2: 201-225.

Baldauf, B. and Santoni, G.J. 1991. Stock price volatility: some evidence from an ARCH model. *Journal of Futures Markets*, 2: 191-200.

Bansal, Vipul K., Stephen W. Pruitt and K.C. John Wei. 1989. An empirical reexamination of the impact of CBOE option initiation on the volatility and trading volume of the underlying equities: 1973-1986. *Financial Review*, 24: 19-29.

Becketti, S. and D.J. Roberts. 1990. Will increased regulation of stock index futures reduce stock market volatility? *Economic Review*, 6: 33-46.

Bessembinder, H. and Seguin, P.J. 1992. Futures trading activity and stock price volatility. *The Journal of Finance*, 57(5): 2015-2034.

Bollerslev, Tim. 1986. Generalized autoregressive conditional heteroscedasticity. *Journal of Econometrics*, 31: 307-327.

Bologna, P. and Cavallo, L. 2002. Does the introduction of stock index futures effectively reduce stock market volatility? Is the 'futures effect' immediate? Evidence from the Italian stock exchange using GARCH. *Applied Financial Economics*, 12: 183-92.

Butterworth, D. 2000. The impact of futures trading on underlying stock index volatility: the case of the FTSE Mid 250 Contract. *Applied Economics Letters*, 7: 439-442.

Chan Kalok, K.C. Chan and G. Andrew Karolyi. 1991. Intraday volatility in the stock index and stock index futures markets. *Review of Financial Studies*, 4: 657-684.

Christos Floros and Vougas, Dimitrios V. 2006. Index futures trading, information and stock market volatility: the case of Greece. *Derivatives Use, Trading & Regulation*, 12(1): 146-166.

Corredor Pilar and Rafael, Santamaria. 2002. Does derivatives trading destabilize the underlying assets? evidence from the Spanish stock market. *Applied Economics Letters*, 9: 107-110.

Dennis, S.A. and Sim, A.B. 1999. Share price volatility with the introduction of individual share futures on the Sydney Futures Exchange. *International Review of Financial Analysis*, 8: 153-163.

Dickey, D.A. and W.A. Fuller. 1979. Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74: 427-431.

Drimbetas, Evangelos, Sariannidis, Nikolaos and Porfiris, Nicos. 2007. The effect of derivatives trading on volatility of the underlying asset: evidence from the Greek stock market. *Applied Financial Economics*, 17(2): 139-148.

Edwards, F.R. 1988. Does futures increase stock market volatility. *Financial Analyst Journal*, 44(1): 63-69.

Engle, R.F. 1982. Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation. *Econometrica*, 50: 987-1008.

Figlewski, S. 1981. Futures trading and volatility in the GMNA market. *The Journal of Finance*, 36(2): 445-456.

Fortune, P. 1989. An assessment of financial market volatility: bills, bonds, and stocks. *New England Economic Review*, (November/December): 13-28.

Goodfellow, Christiane and Salm, Christian A. 2008. Do individual investors on the futures market induce higher spot market volatility? Working Paper, Westfalische Wilhelms-University Munster, Germany.

Granger, C.W.J. 1969. Investigating causal relations by econometric models and cross spectral methods. *Econometrica*, 36: 424-438.

Harris, Lawrence. 1989. S&P 500 Cash stock price volatilities. *Journal of Finance*, 44(5): 1155-1175.

Hodgson, Allan and Des Nicholls. 1991. The impact of index futures markets on Australian share market volatility. *Journal of Business Finance and Accounting*, 18: 267-280.

Illueca, M. and J.A. Lafuente. 2003. The effect of spots and futures trading on stock index market volatility: A non-parametric approach. *Journal of Futures market*, 23(8): 1-32.

Kailash Chandra Pradhan and K. Sham Bhat. 2008. An empirical analysis of the impact of futures on spot market volatility: Evidence from National Stock Exchange (NSE), India. *Indian Journal of Economics and Business*, 7(2): 247-253.

Karanthanassis, G.A. and Sogiakas, V.I. 2007. Spill over effects of futures contracts initiation on the cash market: a comparative analysis, MRPA Working Paper No. 5958, University Library of Munich, Germany.

Kyriacos, K. and L. Sarno. 1994. The temporal relationship between derivatives trading and spot market volatility in the UK: empirical analysis and monto carlo evidence. *The Journal of Futures market*, 19(3): 244-270.

Lee S. Bin and Ohk ki Yoo. 1992. Stock index futures listing and structural changes in time-varying volatility. *Journal of Futures Market*, 12(5): 297-304.

Lutkepohl, H. 1993. *Introduction to Multiple Time Series Analysis.* 2nd edition, Springer-Verlag, Berlin, Germany, pp. 545.

Nath Golaka C. 2003. Behavior of stock market volatility after derivatives. *NSE Newsletter*, http://www.nseindia.com/content/press/nov2003a.pdf,2004, National Stock Exchange, India.

Nupur, H. and Saikat Sovan Deb. 2004. Impact of index futures on Indian stock market volatility: an application of GARCH model. *The ICFAI Journal of Applied Finance*, 10(10): 51-63.

Perieli, A. and G. Koutmos. 1997. Index futures and options and stock market volatility. *Journal of Futures Markets*, 17(8): 957-974.

Phil Holmes. 1996. Spot price volatility, information and futures trading: evidence from a thinly traded market. *Applied Economics Letters*, 3(1): 63-66.

Phillips, P. and Perron, P. 1988. Testing for a unit root in time series regression. *Biometrica*, 75: 335-46.

Pok, Wee Ching and Poshakwale, Sunil. 2004. The impact of futures contracts on the spot market volatility: the case of Kuala Lumpur Stock Exchange. *Applied Financial Economics*, 14: 143-154.

Puja Padhi. 2008. Impact of futures and asymmetric effect on the volatility of Indian stock market. *Indian Journal of Economics and Business*, 7(2): 207-213.

Raju, M.T. and Karande, K. 2003. Price discovery and volatility on NSE futures market. *SEBI Bulletin*, 1(3): 5-15.

Ramana, Rao S.V. 2007. Impact of financial derivative products on spot market volatility: A Study of Nifty. *The ICFAI Journal of Derivatives Market*, 4(1): 7-16.

Ryoo, Hyun-Jung and Smith, Graham. 2004. The impact of stock index futures on the Korean stock market. *Applied Financial Economics*, 14(4): 243-251.

Santoni, G.J. 1987. Has programmed trading made stock price more volatile? *Federal Reserve Bank of St. Louis, Review*, 69: 8-29.

Shenbagaraman, P. 2003. Do futures and options trading increase stock market volatility. NSE Research Initiative Paper No. 20, National Stock Exchange, India.

Skinner, Douglas J. 1989. Options markets and stock return volatility. *Journal of Journal of Financial Economics*, 23: 61-78.

Spyrou, S.I. 2005. Index futures trading and spot price volatility: evidence from an emerging market. *Journal of Emerging Market Finance*, 4(2): 151-167.

Thenmozhi, M. 2002. Futures trading, information and spot price volatility of NSE-50 index futures contract. NSE Research Paper, National Stock Exchange, India.

Thenmozhi, M. and M. Sony Thomas. 2004. Impact of index derivatives on S & P CNX Nifty volatility: information efficiency and expiration effects, *The ICFAI Journal of Applied Finance*, 8(8): 36-55.

Vipul. 2006. Impact of introduction of derivatives on underlying volatility: evidence from India. *Applied Financial Economics*, 16: 687-697.

Zhong, M., A.F. Darrat, and R. Otero. 2004. Price discovery and volatility spillovers in index futures markets: some evidence from Mexico. *Journal of Banking & Finance*, 28: 3037-3054.

Stock Price Decision of Indian Investors

ABDUL AZIZ ANSARI AND SAMIRAN JANA

Efficient market hypothesis does not acknowledge the effect of noise trader's decisions on stock price. Through an extensive survey on Indian market the present study has proved that there will be two kinds of investors - rational traders and noise traders. In an uncertain situation decision making process of noise trader will go through mental biases - self attribution bias, loss aversion bias, confirmation bias and overconfidence bias. As a result the noise traders will belief that some irrelevant information will be more important for price decision and they will trade more. This study has proved that some of the rational trader's decision process also guided by all these biases. So rational traders also will not be able to predict the mental behaviour of noise traders and effect of sentiment will be at Indian stock market.

Introduction

Stock trading is the ultimate decision of an investor based on available information in the market. In efficient market this will be a stock's fundamental value: the net present value of future cash flows. As information is random so associated price of a stock will be random. The probability distribution of random variables becomes normal when the amount of time separating them becomes large. Therefore researchers applied lots of statistical theories to predict the likelihood of expected price and risk of a stock. But this efficient market hypothesis[1] stands on three weaker assumptions - first, investors are assumed to be rational and value securities rationally. Second, some investors may not be rational but their trades are random and therefore cancel each other out without affecting prices. Third, a group of investors may be irrational in similar way but they met in the market with rational arbitrageurs who eliminate their influence on prices. Therefore the efficient market hypothesis agrees about the presence of noise traders but does not recognise their effect on ultimate price.

Psychology does not support any of these assumptions. It tells that people in general and investors in particular are not fully rational. Many investors react to irrelevant information in forming their demand for securities. Evidence shows that instead of deviating from rationality randomly most people would like to go with a trend (Haridas 2003) and they wait till its well establishment Peter (1996). There is no guarantee that pessimistic (or optimistic) irrational traders will not become more pessimistic (or optimistic)

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tomorrow. If rational traders have to liquidate before price recovery then they will book losses, which will not allow them to arbitrage at the market. Ultimate price may not be the fundamental value of a stock. Indian market has experienced huge deviations from efficient market hypothesis. Financial theorists have identified these as anomalies, but behavioural scientists are saying that these are processes generated. So it is possible that rational traders are not able to mitigate the effect of irrational trader's effect on stock price.

Review of Literature

Investors do not follow economists' advice to buy and hold the market portfolio. Individual investors typically fail to diversify, holding instead a single stock or a small number of stocks (Lewellen, Schlarbaum and Lease, 1974). They often pick stock through their own research. They may get their pseudo signals from technical analysts, stockbrokers or economic consultants and irrationally belief that these signals carry information. They are being termed as noise trader[2]. Noise traders falsely believe that they have special information about the future price of the risky asset. (De Long, Shleifer, Summers and Waldmann, 1990). Rational traders will belief on fundamental analysis for choosing stocks.

EMH will be applicable in any market if the investors are taking decision based on the rational decision making model. The rigid assumptions of the rational model are often unrealistic (Steers and Black1994). Roads (1998) proved that simple problem with few alternative courses of action or complex problems with costless and easy solvable alternatives are fit for rational model. Decisions are categorized into two forms - programmed (repetitive operational problems, well-defined goals, clear information and alternatives, certainty about outcome) and nonprogrammed (novel strategic problems, ill-defined goals, ambiguous information and alternatives, uncertainty about outcomes) (Steers and Black 1994). Stock price decision fits into the nonprogrammed decision for its uncertain outcome. In the case of nonprogrammed decisions, decision makers allow systematic biases and errors to creep into the judgments (Robbins 2004). Therefore biases will also influence investor's decision making processes. Kahneman and Riepe (1998), showed that investors rely on some fixed rules and intuition when making financial decisions, and there are some related cognitive biases and illusions in decision-making, such as overconfidence, optimism, and overreaction to chance events. Hilton (2001) mentioned that overconfidence, confirmation bias, optimism and risk aversion will effect the investor's financial decision. Tourani-Rad and Krikby (2005) showed that investors will be overconfident if they have past success, optimism, confidence in one's ability, investment experience and investment related knowledge. Barber and Odean (2000) found that the average US investor has an average annual portfolio turnover of 75 percent and that the average net return to investors who trade frequently is 7.1 percent lower than the return to investors who trade infrequently, providing a strong case that excessive trading harms investment performance. Barber and Odean explain these high trading levels

with investor overconfidence. Second, traders that are overconfident are said to hold underdiversified portfolios (Odean 1998, Nofsinger 2002). A well known bias in human-decision making is to seek confirmation, rather than disconfirmation, for hypothesis (Hilton 2001). Shefrin and Statman (1985) interpret another behavior in the stock markets, so called regret. Investors usually keep the stocks whose prices are below their costs, because they want to avoid losses instead of risk. So they are loss averse not risk averse. Wood and Zaichkowsky, (2004) said individuals tend to attribute their success to their personal abilities, and their failures to bad luck or the actions of others, which is called self attribution bias. Individuals also tend to ignore, or atleast underweight, information that lowers their self-esteem (Daniel and Titman 1999). As a result, investors tend to forget past failures. For these mental biasness noise trader's mental behaviour will be totally unpredictable to rational trader. For their falsely belief the prediction of noise trader's price decision will be unrelated to fundamental value of the assets. This will create their sentiment. Neither Siegel (1992) shows that neither changes in interest rates nor changes in future earnings account for the dramatic valuation changes around the October 1987 crash. He concludes that shift in investor sentiment are correlated with market returns around the crash.

Chaudhuri (1991 a) applied serial correlation and run test on closing price of 93 stocks over the period January 1988 to April 1990 and saw that 72 stocks have significant correlations, standard normal variate z is significant at 5 per cent level for 63 stocks out of 93. So these returns do not support the random walk hypothesis. Ahmad, Ashraf and Ashraf (2006) used Unit Root Test, Autocorrelation Function, Garch test and Kolmogorov Smirnov test on the return of S&P CNX Niffty and Sensex during 1995 and 2004 and saw that in all cases null hypothesis of random walk has been rejected. Chaudhuri (1991 b) used Kruskal-Wallise test on data of BSE sensitive index between June 1988 and January 1990 and saw that average returns on Monday are negative and highest returns are on Friday. Amanulla and Thiripalraju (2001) saw the week end effect in the 82 companies traded in the Bombay Stock Exchange (BSE). They used daily returns from January 1990 to December 1999.

These studies prove that random walk does not exist at Indian stock price. Therefore there will be two kinds of investors in Indian market and rational traders are not able to erase the noise trader's effect from the price.

Research Methodology

After extensive pretesting with regular traders, a questionnaire was finalized to gather information. The first section categorized the traders into noise and rational. This section includes: Self attribution bias, Loss aversion bias, Confirmation bias and Overconfidence bias.

Questions in part two asked participants to recall number of stocks traded in a year, amount of portfolio and monitoring frequency. Part three included the demographic questions. Statistical processes like mean, one way ANOVA,

standard deviation and correlation has been used to check the interrelationship between these biases and trading activities.

Sampling

The convenience sampling procedure was used as we need data from active traders, who are trading personally or asking brokers to trade according to their personal decision. Questionnaires were distributed personally, emailed to friends, relatives, colleagues, students of three executive MBA classes and fund managers of mutual funds. Eight of the fund managers were interviewed personally over telephone. Out of 700 attempts total 136 responses were collected.

Analysis

Respondents were asked to assign degree of importance on the stock picking procedures - fundamental analysis, technical analysis, advice of financial consultant, information from friends relatives and media, own gut filling and other than these in the stock market, used by them, when they choose stock/stocks for themselves or for their own clients. Five was given for most important and one was for least important parameter. Table 1 shows that last parameter i.e. other than the rest parameters has the lowest mean 1.62. This implies that other five parameters are main parameters for searching stock/stocks at stock market. Fundamental analysts have marked technical analysis also as one of the important or most important usable parameter. This does not support the view of De Long, Shleifer, Summers and Waldmann, 1990.

Table 1: Degree of importance

Parameters	Fundamental Analysis	Technical Analysis	Financial Consultant	Information from friends relatives and media	Gut filling	Other than above
Mean	3.21	3.14	3.37	3.13	3.04	1.62
Standard Deviation	1.50	1.44	1.38	1.50	1.59	1.33

In case of self attribution bias someone will not blame himself for his failure and will give credit to himself at the time of success. Two questions were asked to gauge the self attribution bias. In first question, respondents were asked to assign importance on their luck, personal stock picking capabilities, wrong guidance by financial consultant, wrong guidance by friends relatives and media, non availability of stock related information and other than these, when they are loosing money at stock market. Table 2 shows that last factor has the lowest mean. This implies that in case of price loss at stock market investors will blame rest five factors.

Table 2: Attribution bias

Parameters	Your Luck	Personal stock picking capabilities	Wrong guidance by financial consultant	Wrong guidance by friends, relatives, media	Non availability of stock related return	Other than above
Mean	3.16	3.40	3.46	3.54	3.301	1.56
Standard Deviation	1.44	1.45	1.37	1.46	1.497	1.51

79.41 percent and 85.29 percent rational traders have marked personal stock picking capabilities and non availability of stock related information as important and most important factor for loosing money. So some of the rational trader's decision making process will also be affected with self attribution bias. A huge amount of noise traders have blamed their own luck (63.24 percent) wrong guidance by financial consultant (77.94 percent), wrong guidance by friends, relatives and media (79.41 percent) for their losses. At the time of profit mostly eighty one (80.88%) percent noise traders and sixty three (63.23%) percent rational traders are saying that their own calculation is responsible for this. Percentage is lower in the case of rational traders because many of the fund managers and fund analysts are working in a group so they are not ready to give whole credit to themselves for profit. Taking these two parameters in consideration we see that only twenty eighty (27.94%) percent rational traders are free from self attribution bias. Loss averseness has been portrayed with their eagerness to take greater risks (possibility of initial losses) in order to earn more return in future. Mostly seventy four (73.53%) percent noise trader and only three percent (2.94%) percent rational traders are either agreed or strongly agreed to buy these types of stocks. Nearly four times of noise traders (77.94 percent) than rational traders (20.59 percent) are saying that they prefer to confirm their decision from knowledgeable people. Therefore noise trader's decision making will be affected with self attribution bias, loss aversion bias and confirmation bias more than rational traders. To check the reality one way ANOVA has been used. Table 3 shows that mean of all parameters under stock choosing, self attribution bias, loss averseness and confirmation bias for noise traders are not statistically different from each other. Because calculated "F" value is less the critical "F" value. This implies that non-fundamentalists have indicated their preferences for these biases.

Attributes for stock selection at stock market include: Advice from financial consultant, Information from friends relatives and media and Gut feeling.

Attributes responsible for price loss at stock market include: Own luck, wrong advice from financial consultant, wrong advise from friends, relatives and media, give credibility to himself when gets profit, loss averse bias and confirmation bias.

Table 3: Noise traders

Parameters	1	2	3	4	5	6	7	8	9
Mean	3.74	3.81	3.91	3.74	3.97	4.19	4.07	4.044	4.015
Variance	1.959	2.217	2.022	1.332	1.313	1.301	0.512	0.640	0.791

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	13.60131	8	1.700163	1.260391	0.261578	1.953744
Within Groups	813.3971	603	1.348917			
Total	826.9984	611				

But this is not true in the case of rational traders because table 4 shows that critical F value is less then calculated F value. Rational traders do not have confirmation bias and loss averse bias and a number of mean of these two parameters are very low.

Table 4: Rational traders

Parameters	1	2	3	4	5	6	7
Mean	4.574	4.265	4.25	4.206	3.706	1.779	2.309
Variance	0.248	0.705	0.996	0.823	1.285	0.6223	1.470

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	487.5798	6	81.26331	92.49284	2.48E-76	2.117903
Within Groups	412.0588	469	0.87859			
Total	899.6387	475				

Attributes for stock selection at stock market include: Fundamental Analysis and Technical Analysis.

Attributes responsible for price loss at stock market include: Personal stock picking capabilities, Nonavailability of stock related information, Does not give credibility to himself when gets profit, Risk averseness and Confirmation bias.

Respondents were asked to rate the performance of their portfolio relative to the stock market over the past year, as past year success can lead to an overestimate of one's abilities. 69.12 percent rational traders can not earn as per the market. More than half of the noise traders have bitted the market. In order to determine investor's level of optimism regarding their future prospects, participants were asked to indicate their future expectations concerning the performance of their portfolio and the stock market in general. Slight majority of rational traders (52.29 percent) and a huge number of noise traders (75 percent) expect that they will outperform the market. There

is not very high positive correlation (0.4219) between the past success and future expectation also.

So past loss will not be the only reason of pessimistic behaviour. Investors were also asked to indicate their degree of confidence in their ability to make good financial decision, their level of investment experience and their knowledge in the area of investments, stocks and trading. 40.44 percent respondents have a reasonable amount of confidence in themselves as investors, 54.41 percent having either a great deal or complete confidence in their abilities. More than two third (84.55 percent) respondents think themselves as very experienced and sound understanding of financial market. In addition 50.74 percent of investors rate themselves as very knowledgeable in the area of finance and 5.88 percent thinks that they are below average. Correlation between respondent's knowledge and their experience is very high and positive (0.66001) but very low between knowledge and future expectation (0.1394). This proves that experienced people are knowledgeable but all of them are not optimistic. Taking into consideration investor's knowledge, experience and future expectations it has been seen that 76.47 percent noise traders and 50 percent rational traders are overconfident.

88.24 percent noise trader will trade very frequently (more than 50 in a month) and only 41.18% rational traders will behave in the same way. This support that Barber and Odean (2000) hypothesis exists in Indian market.

Conclusion

Results reported from the investigation of 136 respondents might not be representative of the average Indian active traders, but still provide an indication of investor's behaviour. This study is showing that rational traders are using both fundamental analysis and technical analysis as stock selection tools, which does not support the view of finance theorist. Separate question on the parameters under fundamental analysis may give clearer picture about the fundamentalists.

Footnotes

1. In his classic statement Fama (1970) defined an efficient financial market as one, in which security prices always fully reflect the available information.
2. Noise traders follow the irrelevant information for stock price decision Black (1986) and Kyle (1985).

REFERENCES

Ahmad, Khan Masood, Ashraf Shahid, Ashraf Shahid. 2006. Testing weak form eficiency for Indian stock markets, *Economic and Political Weekly*, Vol XLI, No. 1, PP 49-56.

Amanulla, S and Thiripalraju. 2001. Week-end effect: new evidence from the Indian stock market, *Vikalpa*, Vol 26, No. 2, April-June, PP 33-50.

Arumugam, S. 1999. Day of the week effects in stock returns: an empirical evidence from Indian equity market, *Prajnan,* Vol XXVII, No. 2, PP 171-191.

Barber, B and T. Odean. 2000. Trading is hazardous to your wealth: the common stock performance of individual investors, *Journal of Finance* 55, pp. 773-806.

Black, F. 1986. Noise, *Journal of Finance*, Vol.41, No.3, PP 529-543.

Brown, Gregory W. and Cliff Michael T. 2004. Investor sentiment and the near-term stock market, *Journal of Empirical Finance* 11, PP 1-27.

Chaudhuri, S.K. 1991a. Short-run share price behaviour: new evidence on weak form of market efficiency, *Vikalpa*, Vol 16, No 4, October - November, PP 17-28.

Chaudhuri, S.K. 1991b. Seasonality in share returns: preliminary evidence on day-of-the week effect, *The chartered Accountant*, November, PP 407-409.

Campbell, J.Y. and Kyle, A. 1993. Smart money, noise trading, and stock price behavior, *Review of Economic Studies*, 60 PP 1-34.

Daniel, Kent and Sheridan Titman. 1999. Market efficiency in an international world, *Financial Analysts Journal*, 55, PP 28-40.

Fama, E.F. 1970. Efficient capital markets: a review of theory and empirical work, *Journal of Finance*, Vol. 25, No.2, PP 383-417.

Figlewski, S. 1979. Subjective information and market efficiency in a betting market. *Journal of Political Economy*, 87, PP 75-88.

Findley, M.C. and Williams, E.E. 2001. A fresh look at the efficient market hypothesis: how the intellectual history of finance encouraged a real fraud-on-the-market, *Journal of Post Keynesian Economics*, Vol. 23, No. 2, PP 181-199.

Haridas, Ajit. 2003. Order in disorder: the chaotic nature of financial market, *IIMB Management Review*, PP 19-25.

Hilton, Denis J. 2001. The psychology of financial decision-making: applications to trading, dealing, and investment analysis, *The Journal of Psychology and Financial Market*, Vol. 2, No. 1, PP 37-53.

Kahneman, D. and Riepe, M.W. 1998. Aspects of investor psychology, *Journal of Portfolio Management*, Vol.24, Iss.4, PP 52-65.

Kyle, A.S. 1985. Continuous auctions and insider trading, *Econometrica*, Vol.53, No.6, PP 1315-1336.

Lewellen, Wilbur G., Schlarbaum, Gray E. and Lease, Ronald C. 1974. The individual investor: attributes and attitudes, *Journal of Finance*, 29, PP 413-33.

Long, De, J.B., A. Shleifer, L.G. Summers and R.J. Waldman. 1990. Noise trader risk in financial markets, *Journal of Political Economy*, 98, PP 703 - 738.

Niarchos N.A. and Alexarkis C.A.2003. Intradey stock price patterns in greek stock exchange, *Applied Financial Economics*,13, PP 13-22.

Nofsinger, J.R. 2002. *The psychology of investing*, Prentice Hall, New Jersey.

Odean, T. 1998. Volume, volatility, price, and profit, when all traders are above average, *Journal of Finance*, 53, PP 1887-1934.

Peters, Edgar E. 1996. *Chaos and order in the capital markets*, 2nd *Edition*, John Wiley abd Sons, Inc.

Roads, D.L. 1998. Selection and evaluation of alternatives in repetitive decision making, *Administrative Science Quarterly*, June PP 196-206.

Robbins, S.P. 2004. *Decide and conquer: making winning decisions and taking control*

of your life, Upper suddle river, NJ: Financial Times / Printice Hall.

Seigal, J.J. 1992. Equity risk premia, corporate profit forecasts and investor sentiment around the stock market crash of October 1987, *Journal of Business* 65, PP 557-570.

Shefrin, H. and Statman, M. 1985. The disposition to sell winners too early and ride losers too long: theory and evidence, *Journal of Finance*, Vol.40,No.3, PP 777-790.

Shiller, R. 1984. Stock prices and social dynamics, *Brookings Papers on Economic Activity*, 2, PP 457-498.

Steers, M. Richard and Black, J. Stewart. 1994. *Organization Behavior*, *5th Edition*, Harper Collins College Publishers.

Stock, James H. and Watson, Mark W. 2004. *Introduction to econometrics*, *2nd Edition*, Pearson Education.

Tourani-Rad, Alireza and Kirkby Stephen. 2005. Investigation of investors' overconfidence, familiarity and socialization, *Accounting and Finance*, 45, PP 283-300.

Wood, Ryan and Zaichkowsky, Judith Lynne. 2004. Attitude and trading behaviour of stock market investors: a segmentation approach, *Journal of Behavioural Finance*, Vol 5, No. 3, PP 170-179.

Voluntary Amalgamations in Indian Banking Sector: Valuation Practices and Adequacy of Swap Ratios

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Consolidation of banks through mergers and acquisitions is an important force of change taking place in the Indian Banking sector. These are driven by the objective of leveraging the synergies arising from the process of M&A. Being banking is an important component of the financial system, these structural changes can potentially have public policy implications. Accordingly, valuation of banks and fixation of swap ratio are very important from the view of shareholders. The present study investigates the valuation procedure and the role of industry level factors in determining the swap ratio of voluntary amalgamations in the Indian banking sector.

Introduction

Between 1995 and 2004 the size of the largest bank in the world has grown three fold by assets from about US $0.5 trillion to US $ 1.5 trillion, almost double the size of India's GDP. This indicates the increased number of business combinations in the banking sector all over the world. Consolidation of banks through mergers and acquisitions is an important force of change taking place in the Indian banking sector. These are driven by the objective of leveraging synergies arising from the process of M&As. In the recent past, economic reforms have brought about a comprehensive change in the competitive landscape of Indian banking system. Due to the financial transformation process, Indian banking is currently witnessing a sea change from 'controlled' to 'market driven' environment (Samal, 2001). This transformation process has made the industry more competitive and deregulated.

M&As have been deeply studied by theoretical and empirical literature investigating the reasons and effects of such operations. It is observed that the central issues for the researchers have been confined to market power and efficiency gains(Manoj and Jagandeep, 2008). They mainly concentrated on measuring the impact on shareholders wealth and efficiency gains (operating performance). According to the guidelines of RBI regarding voluntary merger, valuation and fixation of swap ratio are an integral part of the merger process. This is due to its increased impact on shareholders and over financial sectors in general.

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Valuations of banks in mergers are carried out after considering certain established rules and financial parameters. In the Indian scenario, banks have also relied upon some analytical methodologies. They used discounted cash flow model or dividend discount model or future maintainable profit method or market value method or the combinations of these methods.

Valuation Methods followed by Merged Banks

Value is a term which is not defined in any statute. Traditionally, a business value has been determined based on the bargaining power of negotiation between the buyer and the seller. But now the business valuation market has grown at a steady pace and will continue to grow due to the high volume of M&A activity in all industries. Valuation of the enterprises, which is a comprehensive activity, is the critical part of any M&A activity due to the depth of analysis required and number of aspects to be looked into. An enterprise is an accumulation of assets and liabilities which is the result of various investments and commercial activities. So valuation of an enterprise means the value of that investment at a given point of time (Wikipedia). The process of valuation needs a lot of creativity, genuinity and subjectivity. Generally, valuation may be done by looking into one or more of the dimensions i.e, going concern or liquidity or market value. These are called the three pillars of valuation process.

The valuation for merger is totally different because it is a relative value more than an absolute value. In financial sense, valuation is carried out to determine the numerator and denominator of the following fraction.

$$\text{Exchange Ratio (Swap Ratio)} = \frac{\text{Company A Share Value}}{\text{Company B share Value}}$$

In this background, swap ratio represents the value obtained by comparing the share values of the companies included in the transaction. In other words, it is the ratio at which the target bank receives shares of the bidder bank in exchange of the shares in the target bank. This ratio depends on various methodological principles governing valuation. Thus, a lot of quantitative and qualitative factors have to be taken into consideration while calculating the swap ratio. Some of the factors are: (1) Nature of the company's business, (2) Financial and capital structure of the company and its legal implications, (3) Incidence of the direct and indirect taxes, (4) Future maintainable profits and growth prospects, (5) Current market price, and (6) Capital adequacy ratio, NPA, EPS, balance sheet size etc.

It is obvious that the methods used for valuation have a key impact on the swap ratio (Justin, 2005). Even though there are many analytical and empirical methods available for this purpose, it is revealed from the valuation reports and annual reports of the various merged banks that the consultants have mostly relied upon the following seven methods.

Dividend Discount Model (DDM): According to this model, the share value is a function of pay-out and profit-growth rate. This model is based on the assumption that discount rate (k) is greater than the dividend growth rate (g).

$$V_0 = D1 \div K_e - g \qquad 4$$

Where, V_0 = Intrinsic value of the share

D_1 = Expected dividend for the year following the valuation

K_e = Cost of equity

g = Perpetual growth rate

Here, k_e can be calculated using Capital Asset Pricing Model (CAPM)

$$k_e = R_f + â (R_m - R_f)$$

where, R_f = Risk free rate

â   = Market beta and

$R_m - R_f$ = Risk premium

The major limitation of this model is that if banks pay dividend out of capital, it will not result in exact valuation, because banks have the option to distribute excess capital that is not supporting organic growth. DDM excess capital model is connected with this aspect. According to this model,

$$V = D_t + TV + SA$$

where, V = Value of the bank

D_t = Present value of the dividend flows in a period of time, after the satisfactory level of capitalization.

TV = Terminal value

SA = Surplus assets

TV = Last distributable explicit dividend $(1+g) / k_e - g$

Discounted Earnings Model: This method is also known as the Discounted Cash Flow (DCF) method. This is based on the concept of time value of money and it is suitable when cash flows are uneven and inconsistent. According to this model, the value of a bank is the sum of two components. The algorithm for this model has two parts: (1) Sum of present value of various future cash flows to the business, and (2) Terminal value. Terminal value of banks is the expected cash flow beyond the explicit forecast period. There are different ways to calculate this value based on multiple assumptions.

Future Maintainable Profit Method: This method is based on the going concern concept. Under this method valuation is based on pre-determined earnings which depend on the future projections of earnings. These earnings must be capitalized by a discount rate: *Intrinsic Value of share = Capitalized future earning / number of shares.*

Valuation Based on Market Value: This method is also based on the going concern aspect of business. It is based on the values derived from the stock market and supported by reliable financial models. This method is mostly used as an auxiliary method for valuation.

Competitive Advantage Model (CAP): Competitive advantage period is the time during which a company is expected to generate returns on incremental investment that exceed its cost of capital. This condition is not expected to be lasted forever. According to the economic theory, competitive forces will

drive returns down to the cost of capital. This theory was proposed by Modigliani & Miller (1961).

Value = NOPAT / WACC + I(R-WACC) (CAP) / (WACC) (1+WACC)

Where, I = Annualized new investment in working and fixed capital

R = Rate of return on invested capital

NOPAT = Net operating profit after tax

WACC = Weighted average cost of capital

NAV Method of Valuation: This is the commonly used method for firm valuation. It is the net value of all assets of the company. In other words, the NAV is the value of its assets less liabilities.

NAV = Total assets - total liabilities/Number of equity shares including bonus shares, or

NAV = Equity share capital + free reserve - contingent liability / Number of equity shares including bonus shares

Valuation Based on Multiples: Generally these methods are used to double check the valuation. The most commonly used multiples are P/E ratio P/BV ratio and EV/EBITDA. These are called multiples because it depicts to what extent investors are ready to pay per earnings or per book value or EBITDA.

P/E Ratio = Market value of share / Earning per share.

Price to book value multiple is a conservative method of valuation, because it is based on the assumption that if bank fails, investors will receive some portion of the investment back. EV/EBITDA multiple is better in comparison of two banks with different financial leverage than   P/E ratio, because EBITDA is pre- interest in contrast to EPS, which is post interest.

EV = Enterprise value=Market capitalization+market value of debt – cash or near cash

EBITDA = Earnings before interest, tax, depreciation and amortization

Objectives of the Study

The main objective of this study is to investigate the valuation aspects of banks and the factors considered in the fixation of swap ratio (exchange ratio) of voluntary bank merger deals in the Indian banking sector. Thus, the specific objectives are as follows:

- To study the valuation methodologies used in the voluntary amalgamations in the Indian   banking sector.
- To examine the adequacy of exchange ratio fixed by the banks
- To find out the relative importance of the factors explaining the exchange ratio.

Research Methodology

We have examined six voluntary amalgamations which had happened in the Indian banking sector (Table 1). These mergers happened for expansion,

diversification and overall growth. We have excluded compulsory mergers because the concept of exchange ratio has less importance for those mergers. Since the total number of voluntary amalgamations is very few, we have used case study method. We have applied both exogenous and endogenous quantitative information to check the authenticity of the exchange ratios. This study is based on secondary data. The financial data for the present study has been availed from different RBI publications, CMIE PROWESS data base and from the records of SEBI, NSE and BSE.

The contribution analysis method is adopted for analyzing the adequacy of the exchange ratio. Comparable contribution method is one of the most popular methods for checking the exchange ratio among control methods for valuation. By using different types of information, both endogenous and exogenous, the possible range of swap ratios have been identified. It is to be noted that this method do not lead to determine the absolute values of intrinsic value, but allow identification of 'weights' to attribute to each bank (Luca Francesco Franceschi, 2008). Through this method, the relative contributions of merging banks compared with resulting from their merger can be identified. The operating capacity of the merging banks can be measured by the comparison of business sizes. Thus, the significance of this comparison purely depends on the selection criteria of the business sizes. We have taken relevant strategic, operational profiles of the banks and also have given due preference to the fundamental aspects of the business. In order to determine the exchange ratio, we have examined various financial and strategic variables.

Table 1: Swap ratio and merger announcement dates of voluntary amalgamations in post-reform period

Bidder Bank	Target Bank	Swap ratio	Merger announcement dates
HDFC Bank	Times Bank Ltd	1: 5.75	Nov 26, 1999
ICICI Bank	Bank of Madura	2:1	Dec 08, 2000
Centurion Bank	Bank of Punjab	9:4	June 20, 2005
Centurion Bank of Punjab	Lord Krishna Bank	7:5	Sept 04, 2006
ICICI Bank	Sangli Bank	1:9.25	Dec 10, 2006
HDFC Bank	Centurion Bank of Punjab	1:29	Feb 23, 2008

Source: Annual Reports of respective Banks

Analysis and Discussion

A comparison of the profile of the bidder and target banks (Tables 2 and 3) clearly indicate that the bidder banks are larger than respective target banks. It is more important to see the capital adequacy ratio of both bidder and target banks, especially in the context of new prudential norms. The statistics of target banks exhibit a steep decreasing trend in the capital adequacy ratio and increasing trend in non-performing assets. The net NPA

of the target banks are well above the industry average. Some of the bidder banks are listed in foreign stock exchanges. ICICI bank is the first Indian bank to be listed on New York Stock Exchange (NYSE) with US GAAP accounting. Centurion Bank of Punjab had been listed on Luxemburg Stock Exchange. Among target banks, Lord Krishna Bank and Sangli Bank were the unlisted banking companies. While analyzing capital adequacy ratios of Centurion Bank and Bank of Punjab, it is also to be noted that Centurion Bank has raised 2.46 billion (of total 3.84 billion) through the preferential allotment in the financial year 2004-05. Out of the 263 branches of Bank of Madura, 182 were in Tamil Nadu and out of 198 branches of Sangli Bank, 158 were in Maharashtra only.

Table: 2: Profile of the target banks

Name of the target banks	Times Bank (As on 31-03-1999)	Bank of Madura (As on 31-03-2000)	Bank of Punjab (As on 31-03-2005)	Lord Krishna Bank (As on 31-03-2006)	Sangli Bank (As on 31-03-2006)	Centurion Bank of Punjab (As on 31-03-2007)
Capital Adequacy Ratio (%)	9.9	14.3	9.2	10.1	1.6	11.1
Net Profit After Tax (Rs/ Cr)	27.1	45.6	-61.2	3.6	-29.0	121.4
Deposits (Rs/Cr)	3011.2	3631.0	4306.6	2278.8	2004.0	14863.7
Advances (Rs/Cr)	1311.2	1665.5	2416.9	1420.9	888.0	11221.4
Balance Sheet Size (Rs/ Cr)	3274.	4443.7	4905.2	2599.3	2150.0	18482.8
Equity Share Price on the day before Merger Announce-ment (Rs.)	17.6	122.5	33.4	NA	NA	56.4
Net NPA (in %)	3.0	4.0	4.6	3.1	2.3	1.3
Number of Branches	35.0	263.0	136.0	112.0	198.0	394.0
Number of Employees	650.0	2577.0	961.0	1192.0	1850.0	7500.0

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE

Business Sizes and Owners Equity: All the banks which are part of the voluntary amalgamation process belong to old private sector banks as well as new private sector banks. Thus, we have included owner's equity as an important variable in analyzing the size of these banks. In terms of deposits, most of the bidder banks are larger than their targets except HDFC Bank Vs Times Bank merger and Centurion bank Vs Bank of Punjab merger. Similarly, in the case of advances also,bidder banks are superior to their targets except Centurion bank Vs Bank of Punjab merger.

It is equally interesting to look at the number of branches and employees. In this regard also bidder banks are better than their targets. In the case of Centurion bank Vs Bank of Punjab merger, the number of branches of

Table 3: Profile of the bidder banks

Name of the Bidder Banks	HDFC Bank (As on 31-03-1999)	ICICI Bank 31-03-2000)	Centurion Bank (As on 31-03-2005)	Centurion Bank of Punjab (As on 31-03-2006) (As on	ICICI Bank (As on 31-03-2006)	HDFC Bank (As on 31-03-2007)
Capital Adequacy Ratio (%)	11.9	19.6	21.4	12.5	13.4	13.1
Net Profit After Tax (Rs/Cr)	82.4	105.3	25.1	87.8	2540.0	1143.5
Deposits (Rs/Cr)	2915.1	9866.0	3530.4	9399.6	165083.2	68297.9
Advances (Rs/Cr)	1400.6	3657.3	2193.9	6533.4	146163.1	46944.8
Balance Sheet Size (Rs/Cr)	4350.0	12072.6	4490.2	11330.2	251388.9	91235.6
Equity Share Price a day before Merger Announcement (in Rs.)	91.6	152.9	15.2	26.2	880.4	1474.9
Net NPA (in %)	1.1	1.3	2.49	1.1	0.7	0.4
Number of branches	57.0	104.0	99.0	249.0	632.0	1100.0
Number of employees	984.0	1500.0	1374.0	5000.0	31500.0	21477.0

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE.

Centurion bank is 37 shorter than that of Bank of Punjab, but the former has more employees. Also, in the case of ICICI bank Vs Bank of Madura merger, the target is superior in terms of number of branches and employees. It is also observed that all the target banks have showed a steep decrease in their net worth from year to year. The comparison of owner's equity does not not make any sense in this regard. The bidder banks are in a much better position in terms of owner's equity as compared to targets.

The analysis has given a range of possible swap ratios in terms of size. From the study it is very much clear that the actual ratios were higher than the ratios obtained from the valuation model. But in the cases of HDFC Bank Vs Times bank merger and HDFC Bank Vs Centurion Bank of Punjab merger, the actual ratios were lower than the ratios obtained. In the light of the analysis, it may be concluded that targets are benefited as a whole in the exchange process.

For better understanding the effect of sizes, we developed a model that allows us to investigate the joint impact of market capitalization and balance sheet size. Any analysis without considering these factors will be incomplete. So we incorporated the market capitalization and balance sheet size and found its combined contribution in the amalgamated banks. In the era of 'free money' the analysis of market capitalization also can have an impact on the swap ratio. Sangli Bank and Lord Krishna bank are excluded from this analysis since their shares are not listed in any of the stock exchanges.

Table 4: Application of the analysis of contributions method

	Parameter	*Deposits (Rs/Cr)*	*Advances (Rs/Cr)*	*No. of Branches*	*No. of Employees*	*Owners' Equity (Rs/Cr)*	*Average Exchange Ratio*
1)	Exchange Ratio	0.97	0.94	0.6	0.7	0.5	0.8
	HDFC Bank	2915.1	1400.6	57.0	984.0	338.9	
	Times Bank	3011.1	1311.1	35.0	650.0	170.8	
2)	Exchange Ratio	0.4	0.5	2.5	1.7	0.2	1.1
	ICICI Bank	9866.0	3657.3	104.0	1500.0	1149.5	
	Bank of Madura	3631.0	1665.5	263.0	2577.0	215.7	
3)	Exchange Ratio	1.2	1.1	1.4	0.7	0.2	0.9
	Centurian Bank	3530.4	2193.9	99.0	1374.0	590.0	
	Bank of Punjab	4306.6	2416.9	136.0	961.0	137.2	
4)	Exchange Ratio	0.3	0.2	0.5	0.2	0.2	0.3
	Centurian Bank of Punjab	9399.6	6533.4	249.0	5000.0	917.7	
	Lord Krishna Bank	2278.8	1420.8	112.0	1192.0	182.8	
5)	Exchange ratio	0.02	0.007	0.3	0.1	0.0012	0.1
	ICICI Bank	165083.2	146163.1	632.0	31500.0	22205.9	
	Sangli Bank	2004.0	888.0	193.0	1850.0	25.0	
6)	Exchange Ratio	0.22	0.2	0.5	0.4	0.3	0.3
	HDFC Bank	68297.9	46944.8	754.0	21477.0	5299.5	
	Centurian Bank of Punjab	14863.7	11221.4	394.0	7500.0	1396.1	

Note: Calculations were based on secondary data

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE

Table 5 shows the results of contribution analysis of market capitalization and balance sheet size. As can be seen from the table, the ratios obtained were contradictory. Except in Centurion bank Vs Bank of Punjab merger, the calculated exchange ratios are well above the actual ratios. Further, it is interesting to note that in HDFC Vs Cbop merger the ratio is almost equal to the actual ratio.

Profitability and Market Multiples: To examine the profitability and fundamental strength of bidder and target banks, we have analyzed the net profit after tax and other market multiples. Net profit after tax is good barometer to measure the profitability of any business. We have included these multiples, because these multiples play a very integral part in determining a company's market value. As compared to the developed financial markets, our price based valuations are very low. Our new private sector banks show an average P/E ratio of 8 and P/B ratio of 2.6. In the case of old private sector banks, it is 4.8 and 1.5 respectively. But in U.S.A and Germany, P/E ratio is 15.2 and 14.1 respectively (FICCI Presentation, 2005). Thus, valuations based on these market multiples are reliable in the Indian context.

Table 5: Comparable contribution analysis with market capitalization and balance sheet size

Particulars	HDFC Bank	Times Bank	ICICI Bank	Bank of Madura	Centurion Bank	Bank of Punjab	HDFC Bank	CBOP
No. of Equity Shares (in Lakhs)	2432.8	1000.0	1968.2	117.7	1566.9	1050.0	3331.4	15668.6
Share quotation a day before Merger Announcement	91.6	17.6	152.9	122.5	15.2	31.9	1474.3	56.4
Market Capitalization a day before Merger Announcement (Rs/Cr)	2227.2	175.5	3010.4	144.1	238.2	334.4	4915.1	8829.2
Market Capitalization (Bidder+ target)	2402.7	3154.5	572.6	57944.4				
Balance Sheet Size (Rs/Cr) Total Balance Sheet Size (Rs/Cr)	4350.0 7624.5	3274.5 16516.3	12072.6 9395.4	4443.7 109718.4	4490.2	4905.2	91235.6	18482.8
% contribution on total balance sheet size (In%)	57.1	42.9	73.1	26.9	47.7	52.2	83.2	16.9
Contribution on Total Capitalization	1370.9	1031.7	2305.6	848.9	273.6	298.9	48180.8	9763.6
Share Value	56.4	103.2	117.2	721.2	17.5	28.5	1446.3	62.3
Exchange Ratio	1.8	6.2	1.7	0.04				

Note: Calculations were based on secondary data

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE

Table 6 indicates that the profitability of target banks are well below the industry standard except in the HDFC bank Vs Cbop merger. In addition to this, Sangli bank and Bank of Punjab were facing losses. But the profitability of the bidder banks is pretty good. It is also important to note that Lord Krishna bank had reported profits in 2006, the year of their merger with Cbop. But, prior to 2006, LKB were incurring heavy losses for almost for 3 years. The market value of shares of bidder banks is far above the market price of target banks. But in the case of Centurion bank Vs Bank of Punjab merger, the market price of Centurion bank was much lower than that of Bank of Punjab. In many cases, the bidder's price is more than 30 times of the targets price. But an analysis of the book values of the merged banks showed the reverse. Most of the target banks have superior book values than the bidder banks. All the bidder banks also show high EPS as compared to the target banks except in ICICI bank Vs Bank of Madura merger. Therefore the different market multiples are also against the target banks.

Table: 6 Analysis based on profitability and market multiples

Name of the Bank	Net Profit After Tax (Rs/crores)	Equity Share Price a day before Merger announce- ment (Rs/share)	Book Value of share	EPS	P/E Multiple	P/BV Multi- ple	Average Ex- change Ratio
1) Exchange Ratio	0.3	0.2	1.0	0.7	0.4	0.2	0.5
HDFC Bank	82.4	91.6	16.9	4.1	16.8	5.4	
Times Bank	27.1	17.5	17.1	2.7	6.5	1.0	
2) Exchange Ratio	0.4	0.8	3.5	6.1	0.1	0.2	1.9
ICICI Bank	105.3	152.9	58.4	6.4	23.9	2.6	
Bank of Madura	45.6	122.4	205.1	38.7	3.1	0.6	
3) Exchange Ratio	-2.4	2.1	3.9	-24.3	-0.1	0.5	-3.4
Centurian Bank	25.1	15.2	5.8	0.2	63.3	2.6	
Bank of Punjab	-62.4	31.9	22.9	-5.8	-0.6	1.4	
4) Exchange Ratio	0.4	NA	2.9	0.6	NA	NA	1.2
Centurian Bank							
of Punjab	87.8	26.2	6.5	0.7	38.5	4.0	
Lord Krishna							
Bank	3.7	NA	19.3	0.4	NA	NA	
5) Exchange Ratio	-0.02	NA	0.001	-0.3	NA	NA	-0.01
ICICI Bank	2540.0	880.4	249.5	28.5	30.9	3.5	
Sangli Bank	-29.0	NA	0.3	-9.1	NA	NA	
6) Exchange Ratio	0.1	0.04	0.1	0.03	1.4	0.8	0.4
HDFC Bank	1143.5	1474.3	169.2	27.8	53.0	8.7	
Centurian Bank							
of Punjab	121.4	56.0	8.6	0.8	73.2	6.6	

Note: Calculations were based on secondary data

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE.

As compared to other analysis, the actual ratios are almost similar to the exchange ratios obtained from this analysis except in Centurion bank Vs Bank of Punjab merger. For ICICI Vs Sangli merger, a negative swap ratio unfavorable to Sangli bank, was found due to its continuous erosion in its net worth, profitability, etc

Even though banks use different methods during the valuation process, these methods provide swap ratios that have no connection with the actual swap ratio. If valuers had derived a swap ratio on the basis of market price of the shares, business sizes and other financial parameters, it would have been beneficial to the bidder banks. The combined results of these methods are shown in table- 7. In certain cases, the combined ratios are far above the actual ratios

Table 7: Summary of possible swap ratios

Basis	HDFC Bank Vs Times Bank	ICICI Bank Vs Bank of Madura	Centurion Bank Vs Bank of Punjab	CBOP Vs LKB	ICICI Bank Vs Sangli Bank	HDFC Bank Vs CBOP
Business Size	0.8	1.1	0.9	0.	0.1	0.3
Size in terms of Market Capitalization and Balance Sheet Size	1.9	6.2	1.7	-	-	0.004
Profitability, Values, EPS, Market Multiples	0.5	1.9	-3.4	1.2	-0.007	0.4
Actual Ratio	0.2	2.0	2.3	1.4	0.1	0.4
	(1:5.8)	(2:1)	(9:4)	(7:5)	(1:9.3)	(1:3)
Average Ratio	1.0	3.0	-0.2	0.7	0.04	0.2

Note: Calculations were based on secondary data

Source: Annual reports of banks, CMIE PROWESS database, www.asiancerc.com, websites of BSE and NSE

Since these mergers happened in the Indian banking sector, it is very relevant to consider the asset quality and capital adequacy of the merged banks (Table 8). New capital adequacy norms are much tighter than the pre-reform phase norms. According to second Narasimham Committee report, 1998, capital adequacy ratio should be taken into account for market risk. According to that report, it should reach at least 9%. The new norms are based on three pillars approach viz, minimum capital requirement, supervisory review and market discipline. We have already examined the effect of profitability on the swap ratio. But that analysis won't give a clear picture, if the analysis of NPA is avoided. Reducing the NPA is essential for the stability of any financial system.

Table 8: Comparison of capital adequacy ratio and asset quality

Name of the Bank	Capital Adequacy Ratio (in %)	Non-Performing Assets (in %)
HDFC Bank	11.9	1.1
Times Bank	9.9	3.0
ICICI Bank	19.6	1.3
Bank of Madura	14.3	4.0
Centurion bank	21.4	2.5
Bank of Punjab	9.2	4.6
Centurion Bank of Punjab	12.5	1.1
Lord Krishna Bank	10.1	3.1
ICICI Bank	13.4	0.7
Sangli Bank	1.6	2.3
HDFC Bank	13.1	0.4
Centurion Bank of Punjab	11.1	1.3

Source: Annual Reports of the Banks

Among the target banks, Bank of Punjab showed the highest NPA of 4.6% (2005) and CBoP showed the least of 1.26% (2007). In case of the bidder banks, Centurion bank showed the highest NPA. But it is well short of its target. In the case of ICICI bank Vs Sangli bank merger, Sangli Bank's capital adequacy ratio was 1.6%. In the first two mergers, we can identify the impact of NPA and capital adequacy ratio on the final ratio. In those cases, the targets got a ratio which is lower than the calculated ratios. This is due to their high NPA and low capital adequacy ratio. But in other mergers, which are occurred after 2000, the actual ratios have no connection with the financial and prudential norms. It may be stated that in these cases stragical factors and exogenous factors have also played a major role.

Findings and Policy Implications

Out of the 6 voluntary amalgamations, the first two mergers have derived swap ratios reasonable to their financials. In other mergers, the exchange ratios are not reasonable. From these mergers, we can isolate Centurion Bank Vs Bank of Punjab merger as a special case, because from the analysis it is clear that this merger has some unique features, not shown by other merged banks. After the merger also, the name of the target bank has incorporated in the name of the bidder bank. The book value of shares of targets are higher than that of bidders in most cases. Whereas in the cases of profitability, balance sheet size, market value of share, EPS bidder banks are superior to target banks.

Except the ICICI Vs Bank of Madura and HDFC Vs Times Bank mergers, the effect of non-performing assets and capital adequacy ratio is neglible. The shares of LKB and Sangli Bank were not listed on any stock exchanges. But the shareholders of these banks are benefitted from the merger, since they got more shares than they actually deserved. Most of target banks were suffering from huge NPA and low capital base.

Conclusion

Consolidation of banking industry is considered critical from several aspects such as need for higher capital, risk management, financing development projects, technology upgradation and improvement in customer service. This paper attempted to provide an analysis of the swap ratios fixed in the voluntary amalgamations happened in the Indian banking sector. Even though merger is not about adding two balance sheets or even the number of branches, inorganic growth is said to be the main motive of all voluntary amalgamations in the Indian banking sector. Merger experience showed that our public sector banks are reluctant towards this voluntary merger wave. In the case of valuation the merged banks have used different valuation techniques. In most of the cases, the final exchange ratio is not justified to their financials.

REFERENCES

Justin Paul. 2005. *Business environment - text and cases*. The McGraw-Hill companies, second edition, pp-257-279.

Kane, E.J. and Unal H. 1990. Modeling structural and temporal variation in the market's valuation of banking firms. *Journal of Finance*, March.

Luca Francesco Franceschi. 2008. Valuation of banks in mergers. academic affiliation, Catholic University of Milan.

Manoj Anand and Jagandeep Singh. 2008. The impact of merger announcements on shareholders wealth. *Vikalpa*, vol: 33 Jan-March.

Meeks, G. 1977. *Disappointing marriage: a study of the gains from merger*. Cambridge University Press, Cambridge University.

Narasimham, M. 1991. Report of the committee on the financial system. Government of India.

Narasimham, M. 1998. Report of the committee on banking sector reforms. Government of India.

Robert Lensink and Iryna Maslennikova. 2008. Value performance of European bank acquisitions. *Applied Financial Economics*, vol. 18, pp185-198.

Samal. 2001. Indian banking system: phases of transition. *IBA Bulletin*, March 2001, special issue.

Sara B Moeller, Frederic D Schangmann and Rene m Stulz. 2005. Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. The Journal of Finance, LX(2) April.

Shyamji Agarwal. 2000. Mergers and Acquisitions of commercial banks in Indian context. IBA Bulletin, April-May.

External Commercial Borrowings by Indian Corporates
An End Use Analysis

S. Aravanan and S. Manikandan

The underdeveloped and the developing economies require external assistance due to the shortage of capital within the country. The governments of these economies, therefore, generally encourage the inflow of external funds into the country. One such inflow of external funds takes the form of External Commercial Borrowings (ECBs). ECBs can be used for any purpose except for investment in stock market and speculation in real estate. They are a source for corporates for expansion of existing capacity as well as for fresh investment. ECBs provide an additional source of funds to companies, allowing them to supplement domestically available resources. Corporates are free to raise ECBs from any internationally recognized source such as banks, export credit agencies, suppliers of equipments, etc. The objective of the article is to analyse the various end uses of ECBs in the Indian context. From the analysis it has been ascertained that end uses of ECBs include: working capital, modernization, expansion of activity, overseas acquisition, refinancing, telecommunication, projects, etc.

Introduction

During the mid-eighties the concessional aid from varied sources to India almost stagnated and India was on a reverse track. It was in this context that India was forced to borrow from private foreign sources, i.e. from the International credit market. Such loans are known as External Commercial Borrowings (ECBs). ECBs include: commercial bank loans, buyers' credit and suppliers' credit, securitised instruments such as bonds, floating rate notes and fixed rate bonds etc, credit from official export credit agencies and commercial borrowings from the private sector window of Multilateral Financial Institutions. ECBs can be used for any purpose (rupee related expenditure as well as imports) except for investment in stock market and speculation in real estate. They are a source of corporates for expansion of existing capacity as well as for fresh investment. Corporates are free to raise ECB from any internationally recognized source, such as banks, export credit agencies, suppliers of equipment, foreign collaborators, foreign equity-holders, International capital markets etc. ECBs provide an additional source of funds to companies, allowing them to supplement domestically available resources. ECBs are being permitted by the Government as a source of finance

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for Indian corporate for expansion of existing capacity as well as for fresh investment. These ECBs can therefore be raised within the policy guidelines of Government of India or Reserve Bank of India applicable from time to time.

Methodology

The objective of the present article is to analyse the end use of External Commercial Borrowings obtained by Indian corporate sector. The study was conducted with the help of Secondary Data collected from RBI website and financial dailies like The Economic Times, The Hindu, Business line and The Business standard. The period of study was four years i.e. from 2004-05 to 2007-08.

Approval Route of ECB

The eligible borrowers for ECBs with Government's /RBI's prior approval are (a) financial institutions dealing exclusively with infrastructure/export finance on a case by case basis, (b) banks and financial institution's which participated in the textile/steel sector restructuring package approved by the Government to the extent of their investment in the package and assessment by RBI on prudential norms, (c) cases falling outside the perview of the automatic route limits maturity period, (d) ECBs with minimum average maturity of 5 years by NBFCs from multilateral financial institutions, reputable regional institutions, official export credit agencies and international banks to finance import of infrastructure equipment for leasing to infrastructure projects, (e) FCCBs (foreign currency convertible bonds) by housing finance companies which satisfy the minimum criteria of net worth of Rs.500 crore, listing on BSE/NSE, minimum size of ECB of US dollars 100 million and submission of purpose/plan of utilization of funds and special purpose vehicles (SPVs)/any other entity set up to finance infrastructure companies/ projects exclusively. Banks would be allowed to issue guarantees, standby letters of credit and letters of their textile units. Multi-State cooperative societies engaged in manufacturing activity would be allowed to raise ECBs provided (1) they are financially solvent, (2) they submit upto date audited balance sheet and (3) proposals comply with other parameters of ECB guidelines such as recognized lender, permitted end-use, average maturity period, all-in-cost ceiling and so on.

The stipulations relating to recognized lenders, all-in-cost ceilings, end-use, guarantee/security, refinancing of existing ECB and prepayment upto US dollars 200 applicable to the automatic route are also applicable to the approval route. Prepayment in excess of US dollars 200 million would be considered by the RBI. The RBI has constituted an Empowered Committee to consider proposals in the prescribed form.

Automatic Route of ECB

The ECBs under the automatic route do not require RBI/Government approval. The ECBs for investment in real sector-industrial and especially infrastructure sector in India are under automatic route. Table 1 shows the

Table 1: Growth and Trend of ECB during 2004-08

Year	No. of Companies			Amount of ECB in US $				
	Automatic Route	Approval Route	Total Route	Automatic Route	Approval in %	Total	Growth	Indices
2004-05	638	16	654	9,913,861,566	1,190,878,157	11,104,739,723	-	100
2005-06	551	26	577	14,079,895,094	1,667,195,120	15,747,090,214	41.81	141.81
2006-07	810	61	871	17,585,142,986	7,432,740,966	25,017,883,952	58.87	225.30
2007-08	540	52	592	20,078,484,389	10,939,679,012	31,018,163,401	23.98	279.34

Source: Reserve Bank of India website

*YC = 10370309605+6901106475 x (orgin of x2004-05)

details of ECB during 2004-05 to 2007-08. Out of 654 companies availed of ECB in 2004-05, 97.55% companies have taken the automatic route whereas 2.45% of companies have chosen the approval route. Dollarwise, through automatic route 89.28% of total ECB was raised and the balance 10.72% was through approval route.

During the year 2005-06, a total of 577 companies availed ECB. Out of this 95.49% of companies have taken the automatic route whereas 4.5% of companies have chosen the approval route. Dollarwise, through automatic route 89.41% of total ECB was raised and the balance 10.59% through approval route. Out of 871 companies availed ECB in 2006-07, 810 (93%) companies have taken the automatic route whereas 61 (7%) companies have chosen the approval route. Dollarwise, through automatic route 70.29% of total ECB was raised and the balance 29.71% through approval route. In 2007-08 out of 592 companies availed, 540 (91.22%) companies have taken the automatic route whereas 52 (8.78%) companies have chosen the approval route. Dollarwise, through automatic route 64.73% of total ECB was raised and the balance 35.27% through approval route. Overall it is observed that during the four year period the percentage of companies which have taken the automatic route has come down gradually from 97.55 in 2004-05 to 91.22 in 2007-08. Dollarwise also the percentage of ECB through automatic route has come down from 89.28% to 64.73%.

Table 1 also shows about ECB's growth and trend from the year 2004-05 to 2007-08. From the table it can be seen that the total amount of ECB availed of by the Indian companies increased consistently throughout the period though the number of companies has come down. Amountwise there was an increase of 2.79 times during the 4 years period. This shows that the external sources are ready to give credit facility to Indian companies.

Enduse details of ECB availed by Indian Corporates

The following are the end uses of ECBs: (1) Working Capital, (2) Import of capital goods, (3) Project, (4) Modernisation, (5) Rupee Expenditure, (6) Refinancing, (7) Onward/Sub-Lending, (8) Expansion of activity, (9) Overseas Acquisition, (10) Telecommunication, (11) Micro Finance and (12) Other Purposes. These details are given in Table 2. From Table 2 it can be seen that in the year 2004-05, 143 companies (20.03%) used ECB for project purpose followed by 135 companies (18.91%) for Import of capital goods, 127 companies (17.79%) for modernisation and 98 companies (13.73%) for rupee expenditure. The remaining companies used ECB for working capital, expansion of activity, etc. In the year 2005-06, 176 companies (29.38%) used ECB for project purpose followed by 159 companies (26.54%) for modernisation, 107 companies (17.86%) for import of capital goods. The remaining companies use ECB for working capital, rupee expenditure, etc. In the year 2006-07, 276 companies (29.97%) used ECB for project purpose followed by 249 companies (27.04%) for modernization, 148 companies (16.07%) for rupee expenditure and 143 companies (15.53%) for import of capital goods. The remaining companies used ECB for overseas acquisition, telecommunication etc. In year 2007-08, 256 companies (40.96%) used ECB

for import of capital goods followed by 100 companies (16%) for project, 102 companies (16.32%) for modernisation. The remaining companies used ECB for micro finance, expansion of activity etc.

Overall End use Details

The overall end use details of ECB for the years 2004-05 to 2007-08 are given in Table No.2.

Table 2: Overall end use details of ECB

End-use	2004-05	2005-06	2006-07	2007-08	Total
Working capital	74	6	5	-	85 (2.97)
Modernisation	127	159	249	102	637 (22.28)
Project	143	176	276	100	695 (24.31)
Import of Capital Goods	135	107	143	256	641 (22.42)
Rupee Exp.	98	54	148	48	348 (12.17)
Refinancing	18	52	15	18	103 (3.60)
Onward/sub-lending	8	8	18	9	43 (1.50)
Exp. of activity	16	4	3	3	26 (0.91)
Overseas Acquisition	-	-	18	57	75 (2.62)
Telecomm.	-	-	5	-	5 (0.18)
Micro Finance	-	-	-	6	6 (0.21)
Local sourcing	5	-	-	-	5 (0.18)
Other	90	33	41	26	190 (6.65)
Total	714	599	921	625	2859
%	24.97	20.95	32.21	21.87	100

From Table 2 it can be ascertained that maximum number of companies i.e. 24.31% (695) of companies used ECB for project purpose 641 companies (22.42%) used ECB for import of capital goods, 637 companies (22.28%) for modernization purpose and 348 companies (12.17%) for rupee expenditure and 103 companies (3.60%) for refinancing. Again from the table it can be

found that companies have stopped using ECB for working capital purpose and for local sourcing purpose.

Though the giant economies like USA, UK, etc., are affected by recession India is well insulated and even in the present global economic slowdown the growth rate in Indian GDP is expected to be in the range of 7 to 8 %. So International financial market and capital market would be willing to provide funds to Indian corporate sector. Realising the importance of ECB to Indian corporate sector the Finance Ministry every now and then relaxes the ECB norms and is actively examining the feasibility of further relaxing the ECB rules as this will lead to increased inflow of funds to Indian corporate sector besides arresting the unprecedented rupee depreciation.

REFERENCES

Abhijit Roy Rakesh Roy. 1997. How to Invest in India.

Chanchal Chopra. 2003. Foreign Investment in India (Liberalisation and WTO- The Emerging Scenario).

Datey V.S. 2002. Taxman's user guide to foreign exchange management.

Datey V.S. 2004. Taxman's FEMA ready reckoner, Taxman Publications Private Limited.

ICFAI University. 2003. Foreign exchange management.

Jeevanandam. C. 2007. Foreign exchange & risk management, Sultan Chand & Son, New Delhi.

Joshi P.R. 2001. Global capital markets profiles dynamics and strategies, Tata McGraw- Hill Publishing Company Limited.

Khan M.Y. Indian financial system, Fifth Edition.

Madhu Vij. 2005. International financial management.

Rajwade, A.V. 1994. Foreign exchange international finance risk management, Academy of Business Studies, 1994.

Seethapathi, K. Forex markets (current trends), ICFAI University Press.

Srinivasan, B. Tata McGraw Hill professional Q & A services, foreign exchange simplied, Tata McGraw Hill Publishing Company Limited.

Suryanaryana, A. Debt markets/new horizons, ICFAI books the ICFAI University Press.

Global Growth, Global Trade and Reduction in Poverty-Inequality in India

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This paper examines the impact of globalization in India using the existing literature on reduction in poverty inequality by considering foreign direct investment, employment and headcount ratios. Though the available data does not reach consensus and the effect of globalization on inequality stands ambiguous, the indepth study reveals the sign of poverty inequality reduction in India. Maximum care has been taken not to over emphasize the effects of globalization and practical study made reveals that there exist poverty in-equality reduction, high level income in the recent past and more consumer expenditure.

Introduction

In simple globalization is making the economy more open. Globalization of the Indian economy means integration of the economy with the world economy. It motivates industries to face competition, provides jobs to many and finally results in the reduction of poverty inequality. India's annual growth rate was 5.5 per cent in 1981-82, 1.4 per cent in 1991-92 and shot up to 9.6 per cent in 2006-07. This growth has improved India's global position, but it is still less than China and Korea.

Reduction in Poverty and Inequality

Different theories have been produced to analyse the effect of globalization on inequality. These theories can be grouped into three. They are Neo-classical theory, the endangerous growth theory and dependency theory of sociologists. The Neo-classical theory expects income convergences across countries in the long term due to increased international mobility of capital. But the endangerous growth theory predicts less convergence and more likely divergence as increasing returns to technological innovation offset in the diminishing returns to capital. Finally, the dependency theory suggests that developing countries reap lesser rewards from economic integration since they have limited access to international market and narrow export base and hence globalization does not lead to absolute convergence.

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substantial decline between country income disparities. Dollar (2004) views that globalization is a positive factor in reducing global inequality and improving the lives of the poor in developing countries. As far as globalization is concerned the conventional indicators of openness that is the trade intensity defined as the aggregate of exports and imports over GDP, and not inflows/ outflows of FDI as a percentage of G.D.P. show remarkable increases from the mid 1980s to 2004. In 1985 world trade intensity was 38 per cent which rose to about 48 per cent in 2003. Similarly the F.D.I. as a percentage of G.D.P. stood at approximately 0.5 per cent in 1985 and increased to 1.7 per cent in 2004.

Table 1 shows that casual labourers had the highest incidence of poverty and the regular workers the lowest during the three periods 1993-94, 1999-00 and 2004-05. The incidence of poverty among self employed was lower than that among casual labour but higher than that among the regular workers. The incidence of poverty is more found in secondary sector i.e., manufacturing when compared to primary sector. We have taken planning commission data while estimating rural poverty and considered state as a unit and determinants like per capita development expenditure, real agricultural wage, per capita G.D.P. agricultural G.D.P, consumer price index of agri labour.

Table 2, reveals that the poverty ratio for total population in major states show that it declined in almost all the states since 1983. Decline in the poverty some of states are having very high poverty ratios for the total population. It was 40 per cent in Bihar and M.P. in 2004-05 and between 30 and 40 Per cent in Maharashtra, Tamil Nadu, Karnataka and West Bengal. The absolute number of total poor in India declined to around 315.48 million in 2004-2006 from around 324 million in 1993-94 – a decline of about 15 million in rural areas and an increase of 6 million in urban areas. The number of very poor declined over time and it was 115 millions in 2004-05 (Table 3).

Growth in Employment

In India the relationship between employment and poverty has attracted the attention of commentators and researchers from time-to-time. Regarding inter-relationship between the above, Lakadawala (1979), noticed that unemployment rates were comparatatively low in many poor regions of the country. On the other side, Dantwala (1979), Parthasarathy (1978), and Sau (1978), observed the relationship between unemployment rate and incidence to poverty. It is necessary at this place to review the changes in the All-India employment level. Table 3 reveals employment growth profile (absolute number) and (growth ratio). From Tables 3, 4 and 5, the following inferences, may be drawn Firstly, the constancy in the growth rate of aggregate employment in 1980's. During 1983 – 1993-94 and in the period 1993-94 to 2004-05, growth rate stood at 1.9 per cent. Secondly the pick up in the employment rates in manufacturing sector in the recent period that is 1999-2000 to 2004-05. Thirdly, the acceleration in the growth rate Fourthly, relatively higher rates of employment in the three service sector, viz., Trade and Hotel, Transport and communication and other services that

include banking of business services. Fifthly, one can observe a greater deal of change in employment shares of total employment in the post reform period compared to the pre reform period.

Table 3: Absolute number of poor and very poor in rural and urban areas
(Surveys of 30-Day Uniform Reference Period)

	1983	1993-94	2004-05
Rural			
Poor	252.05	247.18	232.16
Very Poor	140.57 (55.8)	102.03 (41.3)	76.70 (33.1)
Urban			
Poor	72.29	77.38	83.31
Very Poor	38.39 (53.1)	38.02 (49.1)	38.42 (46.1)
All			
Poor	324.34	324.55	315.48
Very Poor	178.96 (55.2)	14.05 (43.2)	115.12 (36.5)

Source : E.P.W. Feb.12-16-2007 P.510.

Table 4: Employment by sector – 1983 to 2004-05 (in million)

Sector	1983	1993-94	1999-2000	2004-05
Agriculture	207.1	239.5	240.3	258.8
Mining and quarrying	1.8	2.7	2.3	2.5
Manufacturing	32.3	39.8	43.8	55.9
Electricity, Water etc.	0.8	1.4	1.0	1.2
Construction	6.8	12.1	17.5	26.0
Trade (retail + wholesale) hotels and restaurants	19.1	28.4	40.9	49.6
transport, storage and communications	7.5	10.7	14.6	18.6
Other services such as finance, business public administration, education etc.,	26.7	39.8	38.1	45.4
All sectors	302.3	374.3	398.4	458.0

Source : NSS employment and unemployment surveys adjusted for population censuses. Employment is measured by number of workers by the usual principal and subsidiary status.

Table 6 exhibits the growth tendency of 14 major states. The division is made on the ground of per capita G.S.D.P for the year 1993-94 in the 14 major states employment grew by 2.8 per cent per annum. Recovery is highly stronger in the high income states (3.2 per cent from 1.4 per cent) at home one can see the better performance of low income states III namely UP and Rajasthan. The rapid growth in employment in India has drawn favourable attention and comments from many circles. For instance Organisation for Economic co-operation and Development, paris (OECD 2007) says that out of 22 million additional jobs created in Brazil, Russia, India and China (BRICS), India has generated nearly half i.e., about 11.3 million a year. The total job actions by OECD is about 3.7 million a year.

Foreign Direct Investment

There is a growing empirical literature on the impact of FDI. The first group of studies focuses horizontal spillover effects of FDI on domestic firms. There main conclusions include that some studies are mixed, some studies Hu and Jeffereson (2002), Lin (2002) and others no significant effect and Kokko Tansingii Zejan (1996) the study by Aitkan and Harrison (1999), said that the impact on local firms is negative. The second group of studies focus on vertical spillover effects. The conclusions from second group of studies reveal that new technologies can solve contract enforcement problems. In an interdependent open and highly competitive world, no country can succeed in isolation on remaining aloof from rapidly changing pattern of financial growth across countries. The role of foreign capital in the economic development can not be kept in isolation. FDI has a direct influence on crucial issues of development such as employment opportunities, growth and export competitiveness.

Foreign Direct investment influences economic growth. This is because the internationalization of production helps to better utilize the advantage of enterprises and stimulate technology transfer and innovative activity, raising a country's technology level. Besides this F.D.I plays an instrumental role in reducing the regional imbalances through transfer of know or low to lagging regions. International Monetary Fund Balance of Payments Manual (BPM 5, 1993) defined F.D.I. as "FDI is a category of international investment involving a long term relationship reflecting a lasting interest in and control by a resident entity in one economy of an enterprise resident in a different economy". Capital transferred from one parent firm adds to local stock and contributes to increase the host countries production base and productivity through a very effective use of existing resources. FDI promote the diffusion of new technology, know-how and managerial and marketing of skills through direct linkages or spillovers of domestic firms.

F.D.I. can introduce new products and technologies and domestic companies can benefit from this personnel turn over, demonstration effects and knowledge spillovers. Kokko (1994) is of the opinion that these horizontal spillovers are however, only important if the technology gap between the foreign and domestic firms is not too large. A second group of studies focus on vertical spillover effects. Studies find that foreign firms facilitate the adoption of new technologies and can solve enforcement problems. F.D.I. is

Table 8 presents the sector wise distribution of FDI inflows over two cumulative time periods 1991-99 and 2000-06. During 1991-99 the cumulative FDI mean inflow was the highest in telecommunication sector with Rs.5768.1 million, followed by transportation Rs.5724.31 million. But during the period 2000-06, electrical equipment sector emerged as a major sector attracting highest FDI inflow with Rs.36335.6. This clearly explains that in the later years of reform process electrical equipment and service sector occupied the highest prediction in attracting FDI inflow in India. The share of FDI for the year 1991-99, the transport industry, the main sector attracting FDI 16.88 percent, followed by electrical equipment 15.2 percent.

Table 8: Top sectors attracting highest fdi inflows in India

Sectors	FDI Stock (1991-99)	Share (percent)	FDI Stock (2000-06)	Share (percent)
Electrical Equipments (including IT and(5158.31) Electronics)	46424.75	15.2 (36335.6)	254349.48	27.9
Transportation Industry	51520.67 (5724.5)	16.88	96703.87 (13814.8)	10.63
Telecommunication	4.376.82 (5768.1)	13.23	123718.05 (17674)	1 3 . 6 1
Power and fuels	36433.77 (4048.2)	11.94	81062.78 (11580)	8.9
Service Sector	40443.49 (4493.72)	13.25	191126.53 (27303.79)	21
Chemicals (other than fertilizers)	39861.28 (4429.03)	13.06	50479.28 (7211.3)	5.5
Food Processing Industries	23676.92 (2630.7)	7.75	25505.52 (3643.6)	2 . 8
Drugs & Pharmaceuticals	8221.75 (913.52)	2.69	42040.91 (6005.8)	4 . 6 2
Metallurgical Industries	6333.34 (703.71)	2.07	27944.01 (3992)	3 . 0 7
Textiles	8293.49 (921.49)	2.72	10463.14 (1494.73)	1 . 1 5
Industrial Machinery	3627.9 (403.1)	1.21	5744.68 (820.66)	0 . 6 3
Total FDI Inflows	305214.18 (33912.68)	100	909138.25 (129876.89)	1 0 0

Source: Business perspectives Vol.9 No.2 2007. P.61

Macroeconomic Impact of FDI

Data provided in Table 9, on different macroeconomic indicators show that after 1990, a sharp improvement has been witnessed in almost all the macroeconomic variables. There exists continuous increase in G.D.P. in all the years. GDP increased from Rs.6531.2 billion in 1991-92 to Rs.35314.5 billion in 2005-06, while current account has witnessed a continuous deficit

during the whole period from Rs.2235 crores in 1991-92 t Rs.331 crores in 1999-00, except a surplus in three years 2001-02, 2002-03 and 2003-04. The rate of inflation was 15.71 per cent in 1991-92. But after reform process initiation price volatility has been cursed and inflation reduced to 5.4 per cent 2005-06 and now it's said to believe that inflation rate touched 0.24 an historic low level never seen so far in the last 40 years. Exchange rate has decreased during post reform period. Foreign exchange reserve depreciated almost 83 per cent during 1991-92 to 2005-06. FER increased from $ 9220 million in 1991-92 to US $ 15162.2 million in 2005-06. Gross domestic savings increased from Rs.1439.88 crores in 1991-92 to 1156.412 crores in 2005-06.

Conclusion

Total poverty ratio that rural and urban based U.R.P. declined by 0.85 percentage points per annum in the pre reform period (1983-94) and 7.0 percentage points in post-reform period (1994-05). The absolute number of poor in India declined to around 315.5 million in 2004-05 from around 324 million in 1993-04. There exist only 115 million people belonging to very poor category. The state level poverty declined in all the states in the pre and post reforms period. Low relative food prices that are existing now is an indication of increase in the eating style thereby enhancing living standards.

REFERENCES

Dantwala. 1979. Rural employment - facts and issues. *Indian Junmail of Labonv Economy* , April-May, 1979.

Himamshu. 2007. Recent trends in poverty and inequality: some preliminary results. *Economic and Political Weekly (E.P.W)* P.498 & 501.

Lakadawala DT. 1970. Growth, employment and poverty. *Indian Journal of Labour Economies*, April- July.

Liesbeth Dries, John FM Swimmers. 2004. FDI, vertical integration and local supplies: evidence from Polish Dairy Sector, 32(9), p.32.

Mahendra Dev, S. and Ravi, C. 2007. Poverty and inequality; All-India and states, 1985-2005. *Economic and Political Weekly (E.P.W)* p. 509, 512.

Partha Sarathy. 1978. Inter-state variations in rural unemployment and growth of agriculture. Occasional paper No.6, Agro-Economic Research Centre Waltair. A.P.

Ramachndra Gowda, et al. 2008. Impact of globalization on regional growth, employment and poverty in India. *Southern Economist* , p.33.

Sau, R. 1978. Growth, employment and removal of poverty. *Economic and Political Weekly (E.P.W)* 12(32 and 33 Spl no) August.

Financial Exclusion to Inclusion – Do SHGs Help? Evidences from North East India

A. P. PATI

As per the latest survey 79 percent of rural population does not have any access to credit. The exclusion of such a vast segment of the population warranted a new form of intermediary and Self Help Groups (SHGs) emerged in India in this direction. Whether SHGs could be an effective intermediary in bringing more inclusion is studied in this article with the help of macro and micro level data. Although the track record of NABARD's national level effort is excellent, this does not percolate down to North-east region. The micro level analysis of Meghalaya situation further suggests that the grading of SHGs and the recovery rate of loan is a cause of worry, which could be possibly true for other States of this region. It is observed that financial inclusion through SHG efforts has a tremendous potential in this region, but there is need of increasing effort by NGOs, state governments and MFIs and banks.

Introduction

Financial empowerment of the poor masses is sin-quo-non to more entrepreneurship and large employment, which influence economic development. The relevance of this fact is well documented in many research findings thus need not to be highlighted again. Being instrumental in the process of empowerment, financial intermediaries play a role of catalyst in channelising resources from surplus householders to deficit ones. More particularly their role is more crucial in case of developing economies. India being in the same trajectory obviously needs a very sound, vibrant and sustainable financial infrastructure for delivery of the necessary inputs across the society in most cost-efficient manner.

It seems that the concerted effort of increasing financial inclusion by rapid expansion of government controlled financial institutions in India has not so far yielded the desired result. Despite the presence of a large number of credit delivery outlets of nationalised banks, regional rural banks, and cooperative banks the rural unprivileged class in particular does not have the access to the minimum financial services. Financial exclusion appears to be more visible than inclusion. Lack of income generation activities in rural areas, grim employment scenario, high level of poverty and other social handicaps are some of the end products of the former. It is increasingly felt

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that the existing financial infrastructure is inadequate and ineffective in providing necessary financial services and there is an exclusion of rural society by the formal financial network, which is detrimental to a holistic economic growth.

Of late the emergence of Self Help Groups (SHGs) in delivering the necessary small finance to the economically poor sections of the society has brought some hope. Considering SHGs as financial entities, which mediate between the ultimate borrowers and the suppliers of finance i.e. micro finance institutions (MFIs)/banks, their role seems to be very crucial in bringing more inclusion.

Financial Exclusion and Inclusion

Financial exclusion is the process by which individuals are unable and/or unwilling to access mainstream financial providers. The former is because of lack of accessibility of formal credit channels due to their location at a large distance from the households, poor physical connectivity in the rural areas, and most importantly the meagre financial strength of the household, which at the first instance dissuades it from going to the providers of finance. Sometimes the rigid procedures of financial provisioning also hinder the ability of the household to a great extent. The unwillingness of the household is a factor of low literacy level, poor financial awareness and sometimes the influence of the village money lenders. No bank account, no savings, no insurance, no affordable credit and no financial education/consultancy are however considered as the indicators of financial exclusion.

Financial inclusion is delivery of banking services at an affordable cost to the vast sections of disadvantaged and low income groups (Leeladhar, 2006). It is the provision of affordable financial services, viz., access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to be excluded (Throat, 2006). As per the Spending Review (Govt. of UK, 2004) increasing the financial accessibility is the key to more inclusion which is indicated through access to banking, access to affordable credit, and access to free face-to-face money advice.

Rural finance is the provision of financial services such as savings, credit, payments and insurance to rural population by organizations that exist along a continuum from formal to informal, ranging from commercial banks to informal village-based savings groups. This includes financing agriculture, agro-processing and other rural enterprises, from part-time income-generating activities to full-time micro-enterprises to small and medium size (SME) enterprises (World Bank, 2006).

In developing economies, it is widely found that the performance of public financial institutions have been disappointing. Most of the government programs funded by them were unsustainable because they were expensive, yielded little revenue, depended too heavily on outside funding, and often suffered serious default problems. Even worse, a substantial portion of the subsidies was captured by the non-poor who could have obtained loans from the commercial market (Hoff & Stiglitz 1990; Adams & Pischke 1992).

charged on informal loans averages 48 percent per annum. According to the same survey, some 59 per cent of rural households do not have a deposit account and 79 per cent of rural households have no access to a formal credit source. Indeed, bank branches in rural areas appear to serve primarily the needs of richer borrowers: some 66 per cent of large farmers have a deposit account; and 44 per cent have access to credit. On the other hand, 70 per cent of the marginal farmers do not have a bank account and 87 per cent have no access to credit from a formal source. All these seem to be one of the consequences of financial exclusion.

So far as the supply of necessary credit is concerned, further evidences as found from the sources of RBI show a clear neglect of rural areas by the formal institutional mechanism (Table-1). Over a period of ten years the share of rural areas has decreased in terms of both the number of branches as well as the amount of credit. The flow of credit to rural India is abysmally low and some times scanty. This can be seen from the declining share of agricultural credit, credit to small and village industries which could be attributed to more exclusion. This has encouraged the informal finance sector to flourish even after fifteen years of financial sector reforms.

The above figures clearly reveal that reaching the rural poor whose credit requirements are very small was found to be difficult. Further, the emphasis was on providing credit rather than financial products and services, including savings, insurance, etc. to the poor to meet their simple requirements. The mismatch in perception - regarding how the poor actually use and value financial services - of those who demanded and supplied financial services, even resulted in some undesirable adverse impression in the minds of service providers regarding the credit worthiness of the poor. This was also, aptly rejected by the pioneer of micro finance that they have an inherent skill: survival skill (Yunus 1999). It is the presence of this skill that keeps them alive even when they are poor. Further, the systems and procedures of banking institutions with emphasis on complicated qualifying requirements, tangible collateral, margin, etc., also resulted in a large section of the rural poor shying away from the formal banking sector.

Thus one of the crucial elements in the policy of attacking poverty is the provision of adequate finance and supplying this with hassle free formalities. Despite several measures, the objective of fulfilling the credit needs of the masses and making it viable in the long run has not been achieved. Keeping these requirements in mind, an alternate mode of financing, i.e. micro financing, was envisaged through the intermediation of small groups of borrowers. Evidence from Asia, particularly from Bangladesh and Indonesia, suggests that good, reliable, responsive, long-term MFIs for the poor can go a long way in improving their access to finance (Morduch and Rutherford, 2003). Grameen Bank in Bangladesh, Bank Ryat Indonesia and BancoSol in Bolivia are some of the successful MFIs around the world, formulas of which are being replicated in many developing countries including India.

Thus alongside bank branch network in the rural areas, SHGs now constitute the grass roots level institutions developed for social/economic and financial intermediation focusing on the poor. NABARD saw the promotion and bank

the recovery rate of micro loans to as high as 90 per cent. It is also the largest non-directed micro savings & micro credit programme in the developing world; and its bank lending rates - fluctuating at market rates around 7% in real terms - are among the lowest (Seibel and Dave, 2002).

Table 3: Region-wise outreach of SHGs

Year	Region Item	North	East	Central	West	South	NE	India
2000-01	No of SHGs	9012	22252	28851	15542	187690	477	263825
		(3.42)	(3.42)	(10.94)	(5.89)	(71.14)	(0.18)	(100)
	Bank Loan	164	190	257	246	3942	9	4809
		(3.40)	(3.95)	(5.35)	(5.12)	(81.98)	(0.19)	(100)
2005-06	No of SHGs	133097	394351	267915	166254	1214431	62517	2238565
		(5.95)	(17.62)	(11.97)	(7.43)	(54.25)	(2.79)	(100)
	Bank Loan	3986	9354	8050	5251	85677	1657	113975
		(2.79)	(8.21)	(7.06)	(4.61)	(75.17)	(1.45)	(100)
LGR	No of SHGs	68.92	78.07	57.13	56.51	43.32	170.95	51.79
(2001-06)	Bank Loan	87.92	119.19	100.76	82.30	85.17	199.35	88.51

Source: Compiled from NABARD data (LGR: Linear Growth Rates)
(Figures in brackets are share in total of the country for the year. Loan amount is in Rs. million.}

The regional spread of SHGs linkages as depicted in Table-3 however, indicates some of the qualitative features of such programme. The highly skewed figure towards the region like southern India is an indication of either unpopularity of the programme or lack of concerted efforts by various agencies to bring more individuals to the fold of SHG movement in other regions.

Observations from North East Region

Against a national average of 72 percent, in northeast region (NE) nearly 85 percent of the total population live in rural areas. This results into rural domination in flow of finance, which is well reflected in the total credit outstanding (Table-4) by all scheduled commercial banks. Interestingly the share of agriculture and small industry is not significant in the total credit outflow; rather it is less than the national average. However, the share of small borrowers in total credit is a typical feature of the credit flow to NE, which is twice that of the all India figure. This signifies the greater importance of small loans and small borrowers in this region.

The measures of financial inclusion in terms of number of accounts per 100 populations and per 100 adult populations clearly reveal greater exclusion of this region from bank intervention. To enhance the inclusiveness of banking activities, SHG linkages were started in this region in late-nineties. Although started late, the outreach of SHGs in this region has picked up in the recent years both in terms of number and credit disbursement to the rural masses. But the numbers as shown in the Table-5 are entirely in

Table 6: Banking services in Meghalaya vis-à-vis NE: Key indicators

Variable	Meghalaya	NE
Population Share in All India (%) (2001)	0.22	3.75
Rural Population Share to Total Population (%) (2001)	80.37	84.49
No. of Bank Branches (2005)	185	1942
Population per Branch (2001 census)	12465	19822
% of Rural Bank Branches (2005)	44.74	32.47
CD Ratio (2005)	43.5	44.63
% of Rural credit (2005)	55.58	40.81
% of Agriculture Credit(2005)	1.91	7.23
% of SSIs and Village Industries Credit(2005)	2.25	4.25
% of Small Borrowers Credit (2005)	10.92	33.85
No of accounts per 100 of population*	21	19
No of accounts per 100 of adult population*	44	37

Source: Compiled from RBI and Census, 2001.* Current Account plus savings account

For a further micro-level analysis of SHG's intermediation, an average State in the NE region is chosen in terms of population and rural dominance thereof, and the presence of banking facilities (Table-6). Considering the figures against the chosen parameters, State of Meghalaya is selected which is probably the best fit for the SHGs. Although the figures which indicate the financial inclusion in Meghalaya stand little better off against the average NE figures, but are lower compared with national figures. Moreover, the credit disbursement to small borrowers and small industries is very low which clearly indicates neglect by the formal intermediaries towards more financial inclusion.

SHG activities in Meghalaya however picked up from 2000 onwards because of the absence of any premier NGO/MFI in the State. The apparent fall in the share of Meghalaya in the recent years is however mainly due to the unexpected rise of SHGs in Assam. The State -level data provided by NABARD however does not reflect the true picture of SHG intermediation in Meghalaya. For our analysis the ground level data have been collected from the State-level agencies of Meghalaya. As seen from the Table-7, more than 3802 SHGs have been credit-linked in the State by the end of March 2006. If we translate the figures into number of families, more than 40000 of them have been reached by these SHGs. The upsurge in recent years is a good indication of more inclusion of poor families into the formal financial network. Of late apart from the commercial banks, cooperative banks are also very actively engaged in SHG financing, which has almost 12 per cent share in the State's total.

Table 8: Upgradation of SHGs under SGSY scheme in Meghalaya
(as on 31st March 2006)

District	% of SHGs Passed Grade I	% of Pased Grade II	% of Grade I SHGs passed Grade II	% of SHGs taken up Economic activities
East Khasi Hills	36.23	11.52	31.80	6.68
West Garo Hills	38.76	2.69	6.94	1.21
West Khasi Hills	67.38	27.16	40.32	11.85
Jayantia Hills	53.72	15.59	29.02	9.83
East Garo Hills	34.99	15.28	43.65	34.99
South Garo Hills	34.49	2.85	8.26	0.00
Ri Bhoi	90.61	9.39	10.36	9.39
Total	46.26	11.62	25.11	11.26

Source: Dept. of Community and Rural Development, Govt of Meghalaya, India

Table 9: Recovery position of SGSY scheme as on 31st March 2006

Aspects of Recovery	SBI	OCBs	RRB	MCAB	ALL BANKS
SGSY Demand of loan (Rs. Lakh)	339.02	20.22	30.92	38.03	428.19
SGSY Recovery of loan (Rs. Lakh)	120.12	5.17	11.20	16.50	152.99
Overdue with SGSY (Rs. Lakh)	218.90	15.43	19.72	21.53	581.18
SGSY Recovery Performance (%)	35.43	25.57	36.22	43.39	35.73
Overall Recovery performance (%)	24.25	-	89.85	-	36.96

Source: State Level Bankers Committee, SBI, Meghalaya, 2006.

branches are not self-sustaining, which could bring a halt to the subsidy-driven credit programmes. Thus, both the indicators *i.e.* grading status and recovery position clearly go against the sustainable effort of the SHG movement in the State, which may also be true for other States of this region. The broader issue of financial inclusion in the region therefore largely depends on the sustainability of the group formation, their efficient operation and financial viability.

Conclusion

Looking at the present outreach in rural areas the inclusion of SHGs into the Indian financial structure will definitely bring a revolution in delivering rural finance. Looking at the macro-level analysis it appears that SHGs have targeted poorer segments of the rural population in an effective manner. Similar observation is also made by RFAS 2003 (Basu and Srivastava, 2005). However, till today SHGs have not been recognized as financial intermediaries in their true sense. Further, there is a need to bring other financial products like micro insurance, fund transfer and mutual funds etc. to their fold. There is enough potential for all these financial services to get accommodated within this SGH set up. While a rosy picture is emerging at all India level, the skewed regional distribution of SHG activities needs to be corrected. In this direction the onus lies on increasing participation and efforts by NGOs, governments and banks in all the regions of the country. Particularly, the

Self Help Group - The Informal Institution for Rural Empowerment

A Case Study of Rajsamand District

I.V. TRIVEDI AND DEEPTI BHARGAVA

This study discusses about the Self Help Group as informal institution for rural empowerment in Rajsamand district.

Introduction

SHGs are proving to be the most effective instruments for financial inclusion and also empower the poor. In Rajasthan, microfinance is almost synonymous with Self Help Groups. The Self Help Movement started more as 'social mobilization' of women for their better place in family and society rather than microfinance movement. There are approximately 1.5 lakh self help groups of women. The study is based on both primary and secondary data. The secondary data is obtained from NABARD and various reports of other banks. The data is also collected from the DPIP office, ICDS office and SGSY project offices of collectorate of Rajsamand and NGO Vishwas Sansthan.

District Poverty Initiatives Project

Rajasthan District Poverty Initiatives Project was launched in July 2000, with financial assistance of the World Bank in seven poorest districts of Rajasthan namely Baran, Churu, Dausa, Dholpur, Jhalawar, Rajsamand and Tonk. In 7 districts (Churu, Baran, Dholpur, Dausa, Jhalawar, Rajsmand and Tonk). Under DPIP more than 20,000 common interestgroups (CIG) have been formed. Though as per the project norms these groups are supposed to function as SHGs but these groups are working as 'activity groups'. Very few groups are doing regular savings and inter loaning. Lately efforts are being made to transform CIGs in to SHGs. An important part of the DPIP strategy is the formation of Self Help Group(SHGs).DPIP gives benefit in group form. For this they make self help group. This group may be in 10 to 20 numbers. This project is exclusively for poor referred as BPL families. There is flexibility for handicapped person and women. The Bheel and Gadoliya lohar are also in this BPL list.

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Table 1: DPIP Project

Project Initiated	*July 2000*
Total Panchayat Samiti	7
Revenue Village	1010
Total Rural Population	8.58
Selected families	57971
Beneficial Families	24875
Total NGO's	16
Scheme handle agency	SHG, Gram Panchayat
Total SHG	3071
Permitted sub Schemes	2521
SHG	303
Gram panchayat	2824
Total Sub-Project in which funds transferred (CIG+G.P.)	2643
Total transferred amount	72.72 cr
Selected group on the basis of stability	726
Group associated with banks	266
Credit Amount	123.74
Groups associated with market	1156

Source: Compiled report through various report of the DPIP

DPIP Contribution

Activities	DPIP contribution (Rs.)	Activities	DPIP contribution (Rs.)
Bartan andBistar Store	7236750	Land labeling and reclamation	3513807
Community building and subcentre	2132174	Link road	1511193
Dairy	19904219	Making of soap and detergent	1958909
Goat	41414867	Bricks and marble slurry	2588052
Health camp	318600	Music bands	10326781
Heterogeneous Activities	1138402	Pappaya Bagwani	831693
Hotel Dhabha	370941	Pasture Development	3345181
Iron Welding based work	1582542	Pattal dona	841162
Kala jatha local folk dance group	1310669	Photography	223034
Khudra bikri trading	475342	Purse making	1199967
		Rcc Shuttering	6261417

Source: Activity report taken by Vishwas Sansthan, Nathdwara

Swaranjayanthi Gram Swarozgar Yojna

Swaranjayanthi Gram Swarozgar Yojana (SGSY) is a modified version of IRDP with a focus on group approach. Cost of group formation and development is met from SGSY funds amounting to Rs.10, 000 per group over a period of 3-4 years. Process approach and social mobilization with minimum of 50% of women groups are salient SHGs approaches. Grading of groups is done once in six months to ascertain their status of performance and corrective capacity building is undertaken. Assistance for economic activities is given through bank loan-cum-scheme subsidy to individuals in groups as well as to groups.

Each Self Help group will be eligible for a maximum subsidy of Rs 1.25 lacs. The application can be routed through the concerned government departments by aspiring entrepreneurs. Under the scheme of SGSY total 1200 groups are to be formed. At the end of Sep08 total 394 group were formed on each panchay (Table 2).

Table 2: Formation of group

Sl. No	Agency	Projected Aim	Self Help Group Formed
1	Amet	105	61
2	Bheem	350	90
3	Devgarh	130	0
4	Khamnor	245	50
5	Khumalgarh	145	46
6	Railmagra	105	47
7	Rajsamand	120	100
	Total	1200	394

Source: yearly progress report by SGSY in the month SEP08

The total formation of groups was low because training was not conducted by facilitator organization. State granted organization RUDTIS is not working in Rajsamand district, therefore they are not getting proper training in the area like Biofuel, computer etc. They are generally engaged in agriculture, handicraft etc activities.

Table 3: Grading of group

Sl. No	Agency		Total Self Help Group	First grading Group	Second grading group
1	Amet	105	13		
2	Bheem	350	75	31	7
3	Devgarh	130	0	0	0
4	Khamnor	245	50	25	1
5	Khumalgarh	145	19	6	2
6	Railmagra	105	47	10	0
7	Rajsamand	120	50	23	1
	Total	1200	254		

Source: yearly progress report by SGSY in the month SEP0

Development of Women and Children in Rural Areas

Groups with a maximum membership of 15 women are formed by the Department of Rural Development under the Development of Women and Children in Rural Areas (DWCRA) scheme. The scheme focuses on organization of women into groups to promote a collective approach to their problems and to enhance their bargaining power. These organised women pull many of the Government programmes into their respective villages for their benefit. Under DWCRA Rs.25,000 is provided to the group as lump sum grant. The members can use it collectively and can be used for any income generating activity. DWCRA recognizes that thrift and credit is essential for improving livelihood. Members are encouraged to save their money as a common fund. Training in leadership, attitudinal changes, and skills for income generation is an integral part of the DWCRA scheme. *The various SHGs are taking bank credit facility. Total 68 groups defined as Bank credit group. This facility is given under the DWCRA scheme* (Table 4).

Table 4: DWCR schemes

S. No.	Name o the District	No. of SHG formed						
		No. of SHG's Formed	No. of SHG's Assisted	SC	ST	W	Disabled	Total
1.	Banswara	41	41	146	381	356	1	601
2.	Dungarpur	44	44	200	399	453	2	600
3.	Rajsamand	50	50	74	264	372	-	684
4.	Udaipur	76	76	154	753	661	4	1050
	Total	211	211	574	1797	1842	7	2935

The Department has initiated to involve SHGs for providing SNP (Supplementary Nutrition Programme) to the AWC (Anganwadi Center) beneficiaries of ICDS Ben's with the objective of: (1) Support local economy and enhance food security. (2) Improve the nutritional status of the vulnerable groups. (3) Strengthen the food supply chain system. (4) Community contribution, participation and ownership. Ultimate would be the community ownership of the ICDS program. (5) Women's empowerment (gender equity) and increased self-esteem. (6) Decision making power and autonomy in the nutrition and feeding practices.

SHG-Bank Linkage

SHG-Banking is a programme that helps to promote financial transactions between the formal rural banking system in India. This system comprises of public and private sector commercial banks, regional rural banks and cooperative banks with the informal Self Help Groups (SHGs) as clients. In India, Self Help Groups or SHGs represent a unique approach to financial intermediation. The approach combines access to low-cost financial services with a process of self management and development for the women who are SHG members. SHGs are formed and supported usually by NGOs or

Tablee 5: Bank credit

Name of Scheme	Projected Group	Groups formed in a month	Groups formed in current-financial year	Total group formed	Bank Account			Bank credit group			Bank loan		
					Previous	current	total	Previous	current	total	Previous	current	total
Rajsamand	72	60	64	433	304	22	326	13	0	13	13.20	0	13.20
Devgarh	70	03	45	236	179	03	182	09	03	12	2.10	1.00	3.10
Kumbhalgarh	70	12	50	468	419	05	424	06	05	11	3.93	4.50	8.43
Bheem	70	05	19	331	297	00	00	00	00	00	00	00	00
Amet	70	00	43	361	219	03	224	11	02	13	12.70	2.40	15.10
Railmagra	70	04	08	407	205	00	205	04	01	05	1.40	0.35	1.75
Khamnor	78	04	39	551	356	02	358	09	05	14	3.35	1.00	4.35
Total			268	2787	1979	52	16	68	36.68	9.25	45.93		

Source: Yearly report generated by DWCRA, Rajsamand

(increasingly) by Government agencies. SHGs have varied origins, mostly as part of integrated development programmes run by NGOs with donor support. The major programme involving *financial intermediation* by SHGs is the SHG-bank Linkage Programme. This Programme was launched in 1992 by National Bank for Agriculture and Rural Development (NABARD), the apex bank for rural development in India.

As on 31 March 2007, 41,60,584 SHGs were maintaining savings bank accounts with the banking sector with outstanding savings of Rs. 3512.71 crore, thereby covering more than 5.8 crore poor households under SHG Bank Linkage Program. *The Commercial Banks had the maximum share of savings from 22,93,771 SHGs (55.1%)* with savings amount of Rs. 1892.42 crore (53.9%) followed by *Regional Rural Banks with savings bank accounts of 11,83,065 SHGs (28.4%)* and savings amount of Rs. 1158.29 crore (32.9%) and *Cooperative Banks having savings bank accounts of 6,83,748 SHGs* (16.4%) with savings amount of Rs. 462.00 crore (13.2%).The share of SGSY SHGs in the total was 9,56,317 forming 22.9% of the total SHGs having savings accounts in the banks.

Three different models of promoting credit linkages have been found feasible and are since applied in India with special emphasis on forming new SHGs:

Model 1 : SHGs formed and financed by banks (16% of SHGs)

Model 2 : SHGs formed by NGOs and formal agencies, but directly financed by banks (75% of all SHGs financed)

Model 3 : SHGs financed by banks using NGOs and other agencies as financial intermediaries (9%)

Table 6: SHG-bank linkage in Rajsamand upto 2006

Sl. No.	Name of the District	Cumulative No. of SHGs provided with bank loan upto 31 March 2005	No. of SHGs provided with bank loan during 01 April 2005 to 31 March 2006	Cumulative No. of SHGs provided with bank loan upto 31 March 2006	Cumulative bank loan disbursed upto to 31 March 2005	Bank Loan disbursed during 01 April 2005 to 31 March 2006	Cumulative bank loan disbursed upto 31 March
1	Rajsamand	1,037	533	1,570	23.17	26.65	49.82

Interloaning

Interloaning can be defined as the sharing of group fund (comprising per member monthly savings and income generated of SPA) at an interest rate so as to raise the total savings of the group. These savings build the credit worthiness of groups, which eventually helps them in receiving micro finance facility. The table shows the total number of groups for interloaning. *The study was conducted in Rajsamand and found total 19820 members are taking interloaning facility.*

Table 7: Inter loaning

Sl. No.	Agency	No. of groups for interloaning	No. of members for interloaning	Total amount	Left amount
1	Rajasamand	405	3607	1681129	2074879
2	Devgarh	179	1274	3060258	3488547
3	Kumbhalgarh	456	4793	2649000	2747000
4	Bheem	238	2685	1321260	2216171
5	Amet	336	3325	1783205	2276187
6	Railmagra	384	3773	2829346	2939346
7	Khamnor	520	363	2595000	3150820
		2518	19820	15919198	18892950

Source: yearly progress report by SGSY in the month SEP08

Conclusion

Large number of poor is still beyond the reach of SHGs and formal financial institution. Only 30% SHGs have been able to take loan from banks. Microfinance is limited to micro savings and credit. Micro finance process requires skill person which is very less. Most Microfinance products and services should be based on the needs of the clients. Largely the SHGs are promoted to meet project requirements/targets. There are many operational problems in SHG-Bank linkage.

REFERENCES

Levy, L. 1979. Processes and activities in groups. In. M. Lieberman & L. Borman (Eds.). Self-help Groups for Coping with Crisis: Origins, Members, Processes, and impact(232-271). SanFrancisco: Jossey-Bass.

Lieberman, M., Yalom, I. & Miles, M. 1973. Encounter groups first facts. San Francisco: Basic Books.

Liu, E. 1997. Self-help groups for parents of children with Cooley's Anaemia. In C. Chan & N. Rhind (Eds.), Social Work Intervention in Health Care: The Hong Kong Scene(296-314). Hong Kong: Hong Kong University Press.

National Bank for Agricultural and Rural Development (NABARD). 1991. A comprehensive Database of Self Help Groups in Rajasthan, Annual report.

National Bank for Agriculture and Rural Development, Guidelines for pilot project for linking banks with SHGs..

Report of Rural Non Farm Development Agency (RUDA). 2008.

National Bank for Agriculture and Rural Development. 1995. Linking self help groups with banks. Mumbai.

Rural Bank of India. 1991. Improving access of rural poor to banking—Role of SHG, Mumbai: Reserve Bank of India.

Rural Bank of India. 1991. Improving access of rural poor to banking—Role of SHG, Mumbai: Reserve Bank of India.

Performance Evaluation of Prime Minister's Rozgar Yojana
A Case Study of Manipur

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The implementation of Prime Minister's Rozgar Yojana (PMRY) in Manipur for a period from 1993-94 to 2005-06 is evaluated. A significant district-wise variation is experienced on the number of entrepreneurs benefited under the scheme. The significant negative annual growth is observed in the four districts viz., Ukhrul (hill), Tamenglong (hill), Imphal East (valley) and Thoubal (valley). The district-wise average quantum of financial assistance has also been found to be highly significant (P<0.01).

Introduction

Educated unemployment has become serious and menacing problems in India. Due to ever increasing number of educated job seeker, the problem of unemployment is continuing to be a matter of serious concern to the country's economy. Realising this, Government of India devised several self employment schemes over the years for involvement of these unemployed persons in the work opportunities. Different steps taken by the government helped a large number of entrepreneurs to come forward and give a fillip to overall development of the country. Various measures, financial and physical have been undertaken by the government to help the growth of entrepreneurship in the changing business environment (Khanka, 2001; Mittal, 2003). The self-employment scheme for educated unemployed youths was initiated for the first time in the country in 1972 (Prasad, 1999). Subsequently during 1983-84, Government of India started a new scheme called Self Employment for the Educated Unemployed Youth (SEEUY). For providing self-employment opportunities to educated unemployed youths, yet another new programme called Prime Minister's Rozgar Yojana (PMRY) was implemented from 1993 in all the states and union territories. SEEUY was merged with PMRY from 1994-95. The scheme continued in the 10th plan with a target of 11 lakh micro enterprises and an annual target of 2.20 lakhs.

PMRY scheme was providing loans, financial assistance to educated unemployed persons who are willing to employ in any one of the trades viz, industry, service and business. The scheme would now cover all economically

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viable activities including agriculture and allied activities but excluding direct agricultural operations like raising crop purchase of manure etc. Self help groups (SHGs) were considered eligible for financing under PMRY effecting from 2003. The scheme has been modified to enhance its coverage and scope. The central government announced a new employment generation scheme called Prime Minister's Employment Generation Programme (PMEGP) in 2008 to create over 37 lakh jobs by merging the existing PMRY and the Rural Employment Generation Programme (REGP). It is implemented jointly by the Directorate of Industries of the state/UTs, District Industries Centre, RBI and bank branches. PMRY has been drawn up in Manipur like other states of the country for the last 15 years. Manipur remains industrially backward and economically underdeveloped even after sixty years of independence (Ibungomacha, 2008). Paliwal (2009) emphasises that in order to ensure more secure, equitable and sustainable future government and other agencies have to play the role of catalysts by creating enabling environment, improving the infrastructural facilities and ensuring equitable access to the various schemes. Thus, it is worthwhile to evaluate whether the objectives of the PMRY scheme have been accomplished or not in the state of Manipur.

Objectives

The objectives of the study are:

- to evaluate district-wise variation in the financial assistance under the scheme.
- to examine the growth of financial assistance of the scheme.
- to investigate the backward areas in the implementation of the scheme, and
- to examine the level of target achievement of the scheme.

Methodology

The study is based on the number of beneficiaries and quantum of disbursement of financial assistance under the scheme of PMRY in Manipur for a period from 1993-94 to 2005-06. The source of data is the Physical Achievement of District Industries (2007), Directorate of Commerce and Industries, Government of Manipur and Economic Survey Manipur 2007-08, Directorate of Economics and Statistics, Government of Manipur. A statistical analysis is carried out to study the nature and pattern of variation in the implementation of PMRY in Manipur. As per nature of the data, the analysis in performed by utilizing the classical statistical tools viz., Curve fitting as growth-analysis, χ^2-test and F-test. The levels of significance of the test statistics are examined at two levels of probability (P-value) say 5% and 1%. The analysis has been done through SPSS vs 13.

χ^2-test is a powerful test for testing the significance of the discrepancy between theory and experiment. F-test or so called analysis of variance (ANOVA) is applied for a quantitative dependent variable quantum of disbursement of loan amount under PMRY by a single factor district. It is

used to test the hypothesis that the district-wise mean values of the disbursement are equal. This technique is an extension of the two-sample t-test. An alternative is to present the p-value or observed level of significance. The p-value is the test level that would just hereby allow rejection of null hypothesis, H_0 (no district-wise difference thereon) given the F-value calculated from the sample. It is the probability of observing a F-value at least as extreme as the F-value calculated from the sample, under the assumption that H_0 is true. Because p-values are probability, they range between 0 and 1. A low p-value is a number near 0, and a high p-value is a number near 1. A low p-value indicates a high observed level of statistical significance, and a high p-value indicates a low observed level of statistical significance.

Analysis

Table-1 manifests the district-wise quantum of beneficiaries and financial assistance (disbursement of loan) under PMRY for a period from 1993-94 to 2005-06. In the first year of implementation of the scheme in Manipur, out of 214 total beneficiaries only two hill districts say Churachandpur with 5% and Chandel with below 2% are benefited. The maximum share of 60% is found in Imphal district which is followed by Thoubal with the share of 21 % and Bishnupur with 13%. Irrespective of hill and valley class only five districts benefited under the scheme in the first year are having highly significant variation (χ^2=219, P<0.01) in the number of beneficiaries. In the similar way there is highly significant difference (P<0.01) in the benefits under the scheme among the districts in Manipur before separation of Imphal East and Imphal West districts during the six years period from 1993-94 to 1998-99.

Just after separation of Imphal East and Imphal West districts in the year 1999-2000, the maximum of 25% out of 820 total units of the scheme is concentrated in Imphal West and the minimum of only 4% falls in Tamenglong while no beneficiaries in Ukhrul. In valley, the Thoubal district does not take the opportunity of the financial assistance under the scheme in the two years 1996-97 and 1998-99 and that of Bishnupur in 1998-99 and 2000-01. Among the hill districts, the educated unemployed youths in Churachandpur have been benefited the financial assistance under PMRY every year right from the inception of the scheme in Manipur. In this investigation, it may be noted that out of 13 years the unemployed youths of Ukhrul district are benefited only seven years. In statistical point of view the benefits under the scheme is not equally distributed (χ^2 = 227.02, P<0.01) to the educated unemployed youths of the districts under study. In the last year of considered period, the district-wise variation in the benefits of PMRY is still highly significant as evidenced by χ^2-value say 336.11 at 0.01 probability level of significance.

The annual average growth in percentage of financial assistance to the beneficiaries under PMRY scheme in the study population for a period from 1996-97 to 2005-06 depicted in Table-2. The district wise variation is

Table 1: Percent distribution of beneficiaries and quantum of financial assistant under PMRY

Year (n; q)	IW	IE	TH	BS	CC	UK	SP	CH	TM	Test χ^2	P
1993-94 (214;188.6)	60.28[c] (59.2)		21.02 (22.1)	12.61 (12.2)	4.67 (5.0)	NA (1.5)	NA	1.40	NA	219.38	<0.01
1994-95 (2026;1651.7)	38.64[c] (35.8)		18.11 (19.5)	7.99 (8.4)	10.21 (11.5)	6.41 (7.4)	8.98 (8.0)	4.14 (4.4)	5.57 (5.2)	1392.62	<0.01
1995-96 (1746;1372.3)	37.80[c] (32.8)		18.32 (22.2)	8.36 (8.4)	10.99 (13.1)	6.81 (8.2)	10.36 (8.8)	4.18 (3.3)	3.15 (3.1)	1234.65	<0.01
1996-97 (1659;1417.9)	45.32[c] (47.8)		NA	15.49 (14.1)	10.60 (11.2)	7.71 (8.6)	12.77 (9.3)	3.61 (4.1)	4.46 (4.8)	1433.51	<0.01
1997-98 (983; 559.1)	33.26[c] (38.4)		29.80 (20.1)	7.83 (5.6)	9.66 (12.3)	NA	11.29 (14.0)	4.37 (6.4)	3.76 (3.2)	608.75	<0.01
1998-99 (450; 355)	40.00[c] (40.9)		NA	NA	22.22 (24.7)	NA	26.44 (21.2)	11.33 (13.1)	NA	75.53	<0.01
1999-00 (820; 557.5)	24.75 (32.7)	15.85 (17.5)	15.73 (11.2)	5.24 (5.3)	14.75 (14.6)	NA	13.76 (11.1)	5.98 (5.5)	3.90 (2.1)	227.02	<0.01
2000-01 (100; 58.4)	14.00 (23.0)	20.00 (20.2)	34.00 (28.5)	NA	8.00 (9.7)	NA	15.00 (12.3)	NA	9.00 (6.2)	26.82	<0.01
2001-02 (627; 388.5)	26.47 (40.6)	14.99 (11.3)	14.35 (10.9)	11.96 (9.9)	5.74 (6.0)	NA	12.12 (9.7)	7.17 (5.7)	7.17 (5.8)	155.12	<0.01
2002-03 (746; 501.2)	31.23 (38.7)	6.70 (6.2)	7.50 (5.3)	5.63 (4.1)	16.62 (15.8)	4.15 (3.4)	18.63 (19.4)	7.64 (5.7)	1.87 (1.3)	469.34	<0.01
2003-04 (595; 367.1)	22.35 (23.0)	9.91 (7.5)	10.75 (7.8)	12.60 (14.2)	18.99 (19.7)	2.52 (1.9)	11.76 (13.7)	8.57 (10.7)	2.52 (1.6)	185.99	<0.01
2004-05 (633;369.6)	31.23 (23.8)	9.16 (6.9)	7.50 (5.7)	13.42 (10.2)	7.10 (6.5)	3.00 (1.7)	21.16 (28.1)	9.47 (14.3)	6.16 (2.8)	177.16	<0.01
2005-06 (500; 279.5)	38.80 (42.8)	16.40 (15.0)	10.80 (7.89)	19.40 (18.4)	5.40 (3.6)	3.80 (2.2)	6.60 (6.6)	2.80 (2.0)	2.00 (1.6)	336.11	<0.01

(n; q)-Number of beneficiaries; quantum of disbursement in lakh-Rupees, IW-Imphal West, IE-Imphal East, TH-Thoubal, BS-Bishmupur, CC-Churachandpur, UK-Ukhrul, SP-Senapati, CH-Chandel; TM-Tamenglong, [c] indicates the figure before separation of Imphal West and Imphal East.

observed in the flow of financial assistance under the scheme. One fascinating and important finding that is negative growth in the disbursement of loan is found in every district in particular and the state Manipur as a whole over the considered period.

Table 2: District-wise annual growth of disbursement under PMRY during the decade: 1997-2006

District	Growth (in %)	Test (F)	P-value
Imphal West	-6.6	0.459	0.517
Imphal East*	-23.9	8.879	0.018
Thoubal*	-18.1	8.011	0.030
Bishnupur	-7.7	0.936	0.371
Churachandpur	-19.3	3.357	0.104
Chandel	-11.9	2.957	0.129
Ukhrul**	-35.6	91.186	0.002
Senapati	-8.9	0.809	0.395
Tamenglong*	-20.9	6.460	0.039
Total (Manipur)	-9.6	1.219	0.302

*Significant at 0.05 probability level; **Significant at 0.01 probability level

A highly significant negative annual growth (-35.6%) exists in Ukhrul district (hill) as evidenced by its model - Test Statistic (F) viz., 91.19 (P<0.01). The three districts say Imphal East (valley), Thoubal (valley) and Tamenglong (hill) are found to have statistically   significant negative annual growth of the scheme. It is quantified by -23.9% (F=8.88, P<0.05), -18.1% (F=8.01, P<0.05) and -20.9% (F=6.46, P<0.05) respectively. The rest five districts viz., Imphal West (valley), Bishnupur (valley), Churachandpur (hill), Chandel (hill) and Senapati (hill) have insignificant rate (P>0.05) in their financial assistance to the beneficiaries under the scheme. In this analysis, it may be concluded that there is no significant growth (F=1.22, P>0.05) of disbursement of loan under the scheme of PMRY in Manipur during the study period despite its visible negative growth of -9.6%.

However, there is highly significant variation on the district-wise average of the financial assistance benefited under the scheme for the considered period of study. It is witnessed by Analysis of Variance (ANOVA- $F_{(8,70)}$)-value, 3.89 (P<0.01) shown in table - 3. While the state's average quantum of financial assistance Rs. 63.28 $\pm$ 66.11 lakh with 95% confidence interval (CI) of the estimate of 48.48-78.09, the maximum share of Rs 143.12 $\pm$ 86.88 lakh (with 95%CI: 80.97-205.27) is benefited to the educated unemployed youths in Imphal West district during the decade (1997-2006). It is followed by Imphal East (Rs. 87.09 $\pm$ 98.66 lakh) and Bishnupur (Rs. 57.68 $\pm$ 58.63 lakh). The lowest average of Rs. 41.52 $\pm$ 32.23 lakh (with 95% CI: 14.58-68.46) is existed in Thoubal among the valley districts of Manipur.

Table 3: District-wise average disbursement amount (Rs. in lakh) under PMRY

District	Mean ± S.D	95% Confidence Interval	
		Lower Bound	Upper Bound
Imphal West	143.12 ± 86.88	80.97	205.27
Imphal East*	87.09 ± 98.66	16.51	157.67
Thoubal*	41.52 ± 32.23	14.58	68.46
Bishnupur	57.68 ± 58.63	8.66	106.69
Churachandpur	61.23 ± 46.83	27.73	94.73
Chandel	31.61 ± 50.52	-31.11	94.34
Ukhrul**	66.21 ± 39.07	38.26	94.16
Senapati	35.61 ± 16.20	23.16	48.06
Tamenglong*	16.75 ± 20.38	1.09	32.42
Total (Manipur)	63.28 ± 66.11	48.48	78.09
Test Statistics		=3.89; P=0.001	

Out of the five hills districts, the maximum share of assistance Rs. 66.21 ± 39.07 lakh (with 95%CI: 38.26-94.16) is benefited to Senapati followed by Churachandpur having the loan disbursement of Rs. 61.23 ± 46.83 lakh at an average during study period. And the lowest average disbursement of Rs. 16.75 ± 20.38 lakh (with 95%CI: 1.09-32.42) is benefited to the educated unemployed youths of Tamenglong district. Thus the distribution of benefits under the scheme is highly different among the districts in Manipur. It may perhaps be caused by the significant difference in the number of educated unemployed youths and the political factors. It is therefore needed to study the discrepancy in the cause-effect relationship in future course of research. In the first year (1993-94) of implementation of PMRY in Manipur, a good quantum of 97.3% of target and 100% of sanctioned cases are disbursed. The disbursement is only 7.9% of cases applied, depicted in table -4. During the period of study that is from 1993-94 to 2005-06, the second year (1994-95) is remarkable in the achievement of the scheme that 101.3% of target, 33.1% of applied and 100% of sanctioned cases are disbursed. Since then, the levels of achievement of the scheme are falling down in the subsequent years of implementation.

Table 4: Year-wise achievement of PMRY in Manipur

Year	Number of cases				Percentage of disbursement		
	Target	Applied	Sanctioned	Disbursed	Target	Cases	Sanction
1993-94	220	2,702	214	214	97.27	7.92	100.00
1994-95	2000	6,118	2026	2026	101.3	33.12	100.00
1995-96	2000	14,048	1753	1746	87.30	12.43	99.60
1996-97	2000	17,588	1717	1659	82.95	9.43	96.62
1997-98	1300	15,504	1039	983	75.62	6.34	94.61
1998-99	1350	20,297	502	450	33.33	2.22	89.64
1999-00	1350	18,620	1035	820	60.74	4.40	79.23
2000-01	1000	17,208	113	100	10.00	0.58	88.50
2001-02	1100	17,104	642	627	57.00	3.67	97.66
2002-03	1300	16,179	763	746	57.38	4.61	97.77
2003-04	1200	17,968	606	596	49.58	3.31	98.18
2004-05	1500	19,823	743	633	42.20	3.19	85.20
2005-06	1500	19,084	564	500	33.33	2.62	88.65
Total	17,803	202,243	11,717	11,099	62.34	5.49	94.72

With the lowest 10% of target, below 1% of applied and 88.5% of sanctioned cases are disbursed in the onset of millennium year 2000-01. The quantum of disbursement of the loan and its procedure in the year is observed likely to be outlier figures in regard to the cases targeted and applied. The important ratios of target-disbursed cases and applied-disbursed cases are having gradual decreasing trend during the period of four consecutive years from 2002-03 to 2005-06. The percentage of cases targeted to its disbursed cases is monotonically declining from 57.4% in 2002-03 to 49.6% in 2003-04, 42.2% in 2004-05 and 33.3% in 2005-06 respectively. The corresponding figures of cases applied to disbursed cases are found to be 4.6%, 3.3%, 3.2% and 2.6% respectively. During the thirteen years of study period a low figure of only 79% of sanctioned cases are disbursed in the odd year 1999-2000. In this year, around 61% of targeted cases and only 4% of applied cases are disbursed the loan under PMRY in Manipur. In this evaluation, a good quantum of around 95% at an average of sanctioned cases is disbursed during the study period. At an average of 62% targeted and only 5.5% of applied cases are disbursed the financial assistance under the scheme of educated unemployed youths in Manipur.

Discussion

Evaluation study on PMRY in 2000-01 conducted by the Institute of Applied Manpower Research (IAMR), New Delhi reveals that 74.7% of sanctioned cases are disbursed. Employment generation is 1.94 persons per functional unit. The study covers the five states viz., Andhra Pradesh, Assam, Manipur, Punjab and Rajasthan. Another evaluation study in 2001 conducted by RBI also reveals that the average level of sanction is 84.55% and 81.44% of the

target and disbursement is at 64.33% and 61.30% of the target through out the country.

Conclusion

In the present evaluation, a good quantum of 95% at an average of sanctioned cases is disbursed during the study period from 1993-04 to 2005-06. It is a greater achievement on the implementation of the project in comparison with the above findings. During the study period of thirteen years, 62% of target cases and only 5.5% of applied cases are disbursed the loan under the scheme. The present evaluation also observes the low achievement of target cases. Thus the target-disbursement achievement on the implementation of PMRY in Manipur is lower than that of average of disbursed in many districts.

REFERENCES

Government of Manipur, Directorate of Commerce & Industries. 2007. Physical Achievement on District Industries Centre Programme.

Government of Manipur, Directorate of Economics & Statistics. 2008. Economic Survey of Manipur 2007-08.

Khanka, S.S. 2001. *Entrepreneurial development.* S. Chand & Company Ltd. New Delhi.

Mittal, K.C. 2003. *Industrial entrepreneurship.* Deep and Deep Publications (P) Ltd., New Delhi.

Paliwal, U.L. 2009. Educated youth and unemployment in Ethiopia. *The Indian Journal of Commerce.* 62(1): 55-62.

Prasad, S. 1999. *Evaluation of Prime Minister's Rozgar Yojana (PMRY) 1994-95.* Institute of Applied Manpower Research, New Delhi.

Singh, M.I. 2008. Role of promotional agencies in industrial development in Manipur: a policy assessment approach. Ph.D. Thesis (unpublished), Manipur University, Imphal.

Auto-rickshaw Transport Service
A Study in Bangalore City

M. Ramachandra Gowda, C.R. Reddy and E.A. Parameswara Gupta

There are 3 lakh families who are working and depending upon this profession. Over the years the dependency on autorikshaw either for short distance or medium distance has been increasing. The core issue is about autorikshaw drivers union, social economic and educational betterment. Economic development will be meaningless unless the plight of workers who are working in the informal sector is improved.

Introduction

A well-knit transport system is a sine quo-non for all round and sound development of economy. It contributes different components and different sectors of the economy and effects all parts of development such as accessibility, flexibility and reliability. Road trasport has vital role to play in the development and opening up of backward and interior or remote areas of the country. India being a developing economy, road transport deserves a high priority as it forms the backbone of both the passenger transport and freight movement. The Private sector operates 60 per cent of the passenger services. The urban transport systems predominatly operated by the private agencies among them include the taxis and auto-rickshaws.

Objectives

The specific objectives of the study are :

● To examine the employment opportunities in auto-rickshaw transport service
● To analyze the perception of respondents.
● To suggest measures for better-rickshaw transport service.

Methodology

The study was confined to Bangalore urban district only. This study aims at studying self sponsored and self employed (ADs) in Bangalore city. According to ADs union and auto-rickshaw drivers Welfare Association (ADWA) the number of auto-rickshaws in Bangalore was 35000 in 1995 (excluding unlicenced autorickshaws) unfortunately no reliable estimate of their number

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is avalable. More than 3 Lakh auto-rickshaw drivers are dependent on auto rickshaw.

Selection of Sample: The present study is based on primary and secondary data. The sample study was fixed at 500 auto rickshaw drivers. Sample was selected at random basis using the multi-stage sampling. In the first stage the auto-rickshaw stands and in the second stage auto-rickshaw drivers were selected at random. After elimination of respondents who could not provide information, the final figure was 500, each 25 from 20 auto-rickshaw stands. Secondary data was collected from the Annual Reports of Trade Union, Traffic police department of Bangalore city and other published sources. Primary data was collected from auto-rickshaw driver respondants with the help of pre-tested schedule.

Review of Literature

Bajaj (1961) studied living and working conditions of 100 ADs in Delhi. This study made an attempt to reveal the issue of ownership pattern police harasment, overcharging the commuters. 74 per cent of ADs are not satisfied with job because of low occupational prestige. Maiti (1969) conducted a study on rickshaw pullers in the city of Nagpur. Nagpur has the highest number of registered cycle-rickshaw pullers in the country. The study by Waiker (l981) conducted about socio economic study of hand-rickshaw pullers in Calcutta is a very small one. Maheshchand (1979) in his study about autorickshaw tranport system in Bangalore city suggested to improvise the service facility but it did not touch socio economic problem and issues of ADs. Anivata and Ravi (2003) have stated in their study that the training programme conducted for ADs in Delhi has been a step towards fostering socially responsible behaviour on the part of the driver.

Findings

Auto-rickshaw Transport Service: The number of auto rickashaws were 10,549 by the end of October 1978 and as per 1981 census the number of autorickshaw were 19333. At present the number of autorikshaws stands at 69,939. But the data supplied by the union stands more. It is more than 1,25,000 including both licenced and unlicenced which are operating in outerskirts. Nearly 3 lakh drivers are depending upon this profession. The government officials, businessmen and professsional like doctors, lawyers use auto-rickshaws.

Table 1: Age of autorickshaw drivers

Years	Nursery	Percentage
16-20	05	1-00
21-30	150	30-00
31-40	245	49-00
41-50	60	12-00
51-69	40	8-00
Total	500	100-00

Source : Field Survery

Features of Drivers: Table 1 reveals that 92.00 per cent drivers are below 50 years only 30 per cent are between 21-30 years and 49 per cent between 31-40 years. It is understood that the profession of auto-rickshaw transport service is confined to the middel aged persons.

Membership: Membership is voluntary nominal monthly fees either Rs. 5/- or Rs. 2/- or Rs. 15/- collected every month. Membership particulars are available in the office of the Labour Commissioner and are reported in Table 2.

Table 2: Membership

Year	ARDU	ADWA	ADU	AATDU
1990	1200	NA	NA	—
1991	1315	NA	NA	—
1992	220	NA	NA	—
1993	800	300	NA	—
1994	750	350	170	—
1995 500	775	amalgamated into AATDU		—
1996	750	—	—	655
1997	750	—	—	700
1998	750	—	—	750
1999	800	—	—	820
2000	800	—	—	975
2001	850	—	—	750
2002	993	—	—	875
2003	1641	—	—	975
2004	1848	—	—	1050

Source : Labour Commissioner office and records of different unions.

ARDU : Autorikshaw Drives Union   ADWA : Autorikshaw Drivers Welfare
                                                                    Association

ADU :   Autorikshaw Drivers Union   AATDU : Adarsha Autorikshaw
                                                                       Drivers Union

Unions often make false claims about norms and do not submit proper information to the labour commissioner. The existing low rate of membership in all 16 union may be due to 1) No interest in politics, 2) No belief, 3) Misappropriation of funds. Table 3 reveals the membership holdings of sample autorikshaw.

Table 3: Trade union membership

Membership	Number	Percentage
ARDU (CITV)	120	24.00
AATDU (HMS)*	70	14.00
Rajivgandhi Autorikshaw Drivers Union	12	2.40
Nonmembers	298	59.60
Total	500	100.00

Source : Field Survey

* ADWA amalgamated with AATDV in 1994

Union Activities: Other than the stated union activities some former members are rendering valuable social service which was highlighted by multimedias in Bangalore. Auto raja a former member of ARDU started 15 years back New Arc Mission of India a home for street sick beggers, handicapped persons suffering from various attack to all parts of the body and girls who are cheated by some persons. The Nightingale Medical Trust Life Saving Services is training ADs in Bangalore city in Basic Trauma Life Support (BTLS) and cardio pulmonary resuscitation (CPR).

Sources of Finance and Vehicle Ownership: Table 4 reveals the membership of ADs own autorikshaw possessed by 24-20 per cent and the rest 75.80 per cent of auto driver respondents have vehicle on rent basis. Thus, interest, maintanance, obtaining permit etc, fall on driver respondents. The cost of the vehicle is higher than the official sale price on account of involvement of financiers and middlemen. The Study revealed among the category of own vehicle respondents 90 per cent or 73.55 per cent obtained loan from a financier who is ready to grant loan up to 50 per cent of requirement depending upon the condition of vehicle only 12 respondents or 10.00 per cent obtained loan from nationalised banks after fulfilling lengthy formalities.

Table 4: The vehicle ownership

Nature of Vehicle	Number	Percentange
Own	121	24-20
Rental	379	75-80
Total	500	100-00

Source: Field Survey

Working Hours: Working hours of ADs varies from a minimum of 8 hours to maximum of 16 hours a day. As many as 300 ADs work 18 hours a day, 100 ADs or 20 per cent work for 15 hours a day. 660 ADs or 10.00 per cent work for 12 hours a day. The average working hours varies between 13.85 hours to 17 hours.

Overworking: Sometimes respondents are working close to minimum wages and under this situation they may over charge. 85 respondents said that they resort to over charge because of more demand and passengers

unawareness etc. Respondents to the tune of 80 or 16.00 per cent reported to the question on overcharging that fare being unreasonable and hence they resort to overcharging.

Monthly Income and Expenditure: Monthly income and expenditure here means net earning made by the ADs on an average per month. Monthly income varies from one locality to the another. Minimum monthly earnings at Mekri Circle underpass varies from a lowest Rs. 4 to the highest Rs. 8100 at Malleshwarm. The maximum at Banashankari where the Godess Banashankari resides touches Rs.10742.

$X_{I\ 1-20}$ = Rs. 7806.00
$X_{I\ 1-20}$ = X income of the ADs working at 20 autoriskaw stands
$X_{E\ 1-20}$ = Rs. 7700.70
$X_{E\ 1-20}$ = X Expenditure of all ADS to 20 stands
$X_{S\ 1-20}$ = X savings
$X_{S\ 1-20}$ = $X_{I\ 1-20}$ - $X_{E\ 1-20}$
            = Rs. 7806.00 - Rs. 7720.70
            = $X_{S\ 1-20}$ = X Rs. 85.30

Karl Pearsons Co-efficient of corelation has been derived and the study finds that +0.8134 relation between income and expenditure in the popular areas like Railway Station, Banashankari and Madiwala. Since there exist high relationship between the variables the ADs earn more since they work hard for more hour every day. The lowest being West of Chord Road where the r stood at +0.4138.

Table 5: Living conditions

Particular		Particulars	No.	Per Cent
A) House	a)	Owned	121	24-20
	b)	Rented	379	75-50
B) Locality	a)	Slum	210	42-00
	b)	Developed	25	5-00
	c)	Developing	215	43-00
	d)	Outer skirts	50	10-00
No. of Rooms	a)	One	410	82-00
	b)	Two	90	18-00
	c)	Three	—	—

Source: Field Survey

Table 5 reveals that 121 respondents or 24.20 per cent lives in their own house and rest in the rental house. The rent forms 18.9 per cent of average monthly expenditure on food items. The houses of 210 respondents 210 i.e., 42 per cent is either located in a slum, 25 respondents or 5 per cent in the developed areas, 215 respondents or 43 in the developing areas and the rest 50 respondents in the out skirts. Today's outskirts are tomorrows developing areas at Bangalore.

Table 6 reveals job satisfactoin and reasons for not satisfaction. Respondents to the tune of 280 i.e., 56-00 per cent are satisfied very much and 100 respondents ie., 20 per cent are not satisfied. 20 respondents out of 100 have clearly stated that more complaints police harassment, includes booking false casess, booking cases on compound basis.

Table 6: Job satisfaction

Opinion	Number	Per cent	Reason for not satisfaction	No.	Per cent to 500
Very much satisfied	280	56-00	Too much police harassment	20	4
Cannot say	120	24-00	Too much licences	25	5
Not at all satisfied	100	20-00	No satisfactory marin	30	6
Total	500	100-00	Problem hiring	25	5

Source : Field Survey

Conclusion and Suggestions

- The workshop on the line of Delhi should be conducted addressing the auto related problems.
- Police should stop booking false cases.
- Carrying of complaint box should be made compulsory so as to enable the commuters to record their experiences.
- Endowment fund should be created by the philantropies in a bank for welfare of respondents similary on the lines of Andhra Pradesh.
- Government sponsored fee medical checkup facilities should be provided.
- Effecive traffic awareness programmes should be launched.

REFERENCES

Anvita Anand and Rajendra Roy. 2003. Autorikshaw drivers in Delhi efficacy of diologue with service providers. *Economical and Political Weekly*, Vol. XXXVIII, p. 3544.

Bajaj S.P. 1979. A study of working and living conditions of 100 scooter drivers in Delhi CSR New Delhi (unpublished disseration).

Baldev Sahani. 2002. How to create 10 million jobs a year. Southern Economist, Vol. 41, p. 13.

Balu, David M.: Self employment and self selection in developing countries labour markets. *Southern Economist, pp.* 351-353.

Beena C & B, Sushma. 2003. Women entrepreneurs managing petty business. *Southern Economist*, pp. 5-7.

Bertrand T & Squire Lyn. 1980. The relevance of the dual economy model. a use study of Thailand. *Oxford Economic Papers*, pp. 480-511.

Chandrasekharaiah M.C. 1975. Marginal impact of employment schemes. *Commerce*, pp.119-120.

Colin Ceys: Interpreting African under employment. reflections on the report on employment. Incomes and equality in Kenya. *African Affairs*, pp. 419-424.

Chriswick, Carelu. 1976. On estimating earning functions for LDC's. *Journal of Development Studies*, pp.165-187.

Dinesh Mohan, Dhann Roy 2003. Operating on three wheels - auto drivers of Delhi, *Economic and Political Weekly.* Vol. XXXVIII, p.177.

Eanest Davis (Ed) Traffic engineering practice E9 F.N. Span Ltd. London T. Duff. 10.

Harris John & Todaro Michael P. 1970. Migration unemployment and development of two sector model. *American Economic Revies*, pp.126-142.

Jayalatha. 2003. Important of commercial banks schemes on growth of entrepreneurship. *Southern Economis, p.* 19.

Maiti Ak. 1980. Socio-economic study of 100 hand rickshaw pullers in Calcutta. ICSR New Delhi Computerised dissertation.

Merrick Thomas W. 1971. Employment and earnings in informal sector in Brazil. *Journal of Developing Areas*, pp. 337-354.

Monapa Arun.1985. Industrial relations in New York, A.M. Kaley: Tata McGraw Hill, p 30.

Waldorf, Saral T. Anol Waldrof, William H. 1983. Earnings of self empoyed in an informal sector. A case study of Banglcon. *Economic Development and Cultural Charge.* pp.587-608.

ECONOMIC EVALUATION OF SPECIAL ECONOMIC ZONES IN INDIA

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The basic premise of this paper is to make an attempt on the nature and extent of SEZs in India. A special focus is being made particularly to map out the distribution of SEZs geographically and land allotment across the states and union territories (UTs) by category-wise in India. Another aspect, which has been covered in this study, is the distribution of land allotment to SEZs and number of SEZs spread by intra-region and intra- state by category. Finally, the allotment of land to SEZs of public companies / corporations and private companies has been addressed and also to see the extent of job creation by these SEZs. The detailed categories of SEZs are classified into four major categories such as IT/ITES; Pharma Bio-tech, Multi-product/ Services and other categories.

At present, India has 15 SEZs, each with an average size of 200 acres. There are 1087 units functioning in these SEZs, and the remaining are at various stages of implementation. Benefit derived from SEZs is evident from the investment of Rs.43,123 crores and employment of 35,053 persons. During 2004-05, the total exports from the Special Economic Zones were of the order of Rs.17,729 crores. This works out to be 4.9 per cent of the country's total exports (Rs.3,61,879 crores). Lured by the heavy incentives, a large number of industrial houses and developers – Indian as well as foreign – are pushing their applications to the State Governments to approve new proposal but the sharp apprehensions and the critique of SEZ policy has forced the Government to do some thinking on the issue.

Findings

The statistical findings of the study with reference to state-wise and region-wise approvals of SEZs and land allotted to them summarized as follows:

Number of SEZ Approvals at State Level and Inter-regional Level in India:

Among the major states, Maharashtra stands at the top with 75 SEZs (19 per cent), followed by Andhra Pradesh with 54 SEZs (13 per cent) and Karnataka and. Haryana have 46 SEZs each. These four states put together about 55 per cent of the total SEZ approvals.

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At the regional level, out of total SEZ approvals in the country, the southern-region dominates with 149 SEZs (about 37 per cent) and a "sizeable number" of SEZ approvals are in the Central and Northern-regions with 90 and 87 SEZs respectively. The above three regions put together have approved more than 80 per cent of SEZs in the country.

Among the major categories of SEZ approvals in the county, the IT/ITES stands at the top with 179 SEZs which is 44 per cent. At the state level, Andhra Pradesh stands first with 30 SEZs, followed by Karnataka with 27 SEZs and the remaining states namely Haryana, Maharashtra and Tamil Nadu have a sizeable number of IT/ITES SEZs. In percentage terms the above five states put together constitutes about 67 per cent of IT/ITES SEZ approvals. As far as inter-regional approvals of IT/ITES SEZs is concerned, the southern-region occupies first place with 85 SEZs (48 per cent) followed by northern-region with 41 SEZs. The above two regions put together constitute about 71 per cent.

Of the 33 Pharma / Bio-tech SEZs approvals (about 8 per cent) in the country, many of them are concentrated in Andhra Pradesh and Maharashtra and these two states put together 'constitute about 50 per cent of SEZs in this category. At regional level, the southern-region has the highest number with 14 SEZs, which constitutes about 42 per cent. Coming to76 Multi-Product/Services SEZs (19 per cent), Maharashtra stands at the top with 19 SEZs, and at the regional level, the central region occupies first place with 23 SEZs (about 30 per cent). In case of 115 Other Categories SEZs (about 29 per cent), Maharashtra has the highest with 26 SEZs followed by Andhra Pradesh and Karnataka. Among the regions, the southern region occupies first place with 34 SEZs (about 30 per cent) followed by the central-region with 28 SEZs.

The above statistical findings suggest that the southern-region has not only dominated with the highest number of SEZ approvals but also in IT / ITES and Pharma / Bio-tech categories of SEZs. The state wise comparison reveals that Andhra Pradesh and Karnataka have the highest number of IT/ITES SEZs, Andhra Pradesh and Maharashtra have the highest number of Pharma / Bio-tech SEZs. Maharashtra stands at the top in the number of SEZ approvals and also in Multi-product and Other Categories of SEZs.

Inter-State and Inter-Regional Land Allotment to SEZs

On the whole, in India about 1.75 lakh hectares (both in formal and in-principle approvals) of land has been allotted for all types of SEZs. Out of this, hardly seven thousand hectares (4 per cent) has been allotted to IT/ITES SEZs; about three thousand hectares to Pharma/ Bio-tech SEZs; a major portion of land i.e., 1.32 lakh hectares (76 per cent) has been allotted to Multi-Product/Services SEZs; and about 32,000 hectares (18 per cent) has been allotted Other Categories of SEZs.

Among the states, Haryana has allotted a discernible proportion of land i.e., 43,818 hectares which accounts for about 26 per cent of the total land allocation, followed by Maharashtra and Gujarat with an allocation 30,827

and 18,448 hectares respectively. The above three states put together allotted about 55 per cent of the total land allocation.

Region-wise land allotment indicates that the northern and the central regions put together have allotted about 58 per cent of land to SEZs. Of the total land allotted to IT/ITES SEZs in the country a major proportion of land has been allotted by the three states namely, Karnataka, Haryana and Andhra Pradesh. Among the five regions, the southern-region has allotted half of the total land for this category.

Of the total land allocated to Pharma/Bio-tech SEZs, Andhra Pradesh, Gujarat and Karnataka put together have allotted about 65 per cent of land for this category. Region-wise analysis reveals that the southern-region has allotted more than half of the total land allotted for this category. Out of 1,32,854 hectares of land allotted to Multi-product SEZs, the three major states namely, Haryana, Maharashtra and Gujarat put together have allotted about 61 per cent of land for this category. In case of land allotment to Other Categories of SEZs is considered, a considerable proportion of land i.e., 38 per cent, has been allotted by Maharashtra and Uttar Pradesh.

As far as the land allotted to public sector companies/ corporations and private companies is concerned, hardly about 13 per cent of the total land is allotted to public sector SEZs and 87 per cent is allotted to private SEZ companies in India. It is surprising to note that West Bengal, Utter Pradesh, Punjab and Rajasthan have not allotted any land to public sector SEZ corporations/companies. It is important to note that Haryana state allotted a considerable proportion of land to its SEZs in the total land allocated to SEZs in India. (about 26 per cent). Out of total land allotted to public sector SEZs in India, a substantial portion of land is allotted by Maharashtra to its public sector SEZs (about 47 per cent). So far the state governments of Bihar and Assam did not initiate the process of establishing SEZs. As a consequence, the eastern region has not shown any mark in the SEZs establishments.

The above statistical findings suggest that a discernible portion of land was allotted to Multi-product/Services SEZs and a meagre share of land was allotted to IT/ITES and Pharma-Bio-tech SEZs in the country. It is to be noted that the northern-region occupies first place in the land allotment to SEZs in India because Haryana state has allotted a sizeable share of land to its SEZs. Another striking feature is that a substantial proportion of land was allotted to private sector SEZ companies in the total land allotment to SEZs in India. Out of the total land allotted to public sector SEZs in India, Maharashtra State has allotted a sizeable portion of land for its public sector SEZs.

Table 1: State-wise approvals of SEZs and land allotted to them
Category-wise upto October 2006

S. No.	Category	No. of SEZs			Land Alloted to SEZs		
		Formal	*In-Principle*	*Total*	*Formal*	*In-Principle*	*Total*
1.	Maharashtra						
	IT/ITES	21	01	22	711	10	721
	Pharma/Bio-Tech	07	01	08	546	200	746
	Textiles	06	03	09	1275	629	1904
	Multi Product	04	15	19	3738	19743	23481
	Auto Mobiles	02	—	02	310	—	310
	Others	08	07	15	1769	1896	3665
	Total	48	27	75	8349	22478	30827
2.	Andhra Pradesh						
	IT/ITES	30	—	30	883	—	883
	Pharma/Bio-Tech	5	03	08	585	225	810
	Multi Product	01	03	04	4134	3050	7184
	Others	09	03	12	3854	493	4347
3.	Karnataka						
	IT/ITES	22	05	27	671	604	1275
	Pharma/Bio-Tech	04	01	05	511	10	521
	Multi Product	—	02	02	—	2331	2331
	Others	03	09	12	306	1775	2081
	Total	29	17	46	1488	4720	6208
4.	Haryana						
	IT/ITES	14	09	23	309	874	1183
	Multi Product	02	12	14	277	41446	41723
	Others	03	06	09	230	682	912
	Total	19	27	46	816	43002	43818
5.	Tamil Nadu						
	IT/ITES	18	02	20	618	120	738
	Pharma/Bio-Tech	—	01	01	—	365	365
	Textiles	—	02	02	—	227	227
	Multi Product	—	05	05	—	4209	4209
	Others	07	02	09	591	166	757
	Total	25	12	37	1209	5087	6296
6.	Gujarat						
	IT/ITES	03	—	03	54	—	54
	Pharma/Bio-Tech	02	02	04	248	299	547
	Petro Ch./Chemic.	02	01	03	456	106	562
	Multi Product	05	03	08	8617	6850	15467
	Others	06	06	12	877	941	1818
	Total	18	12	30	10252	8196	18448
7.	West Bengal						
	IT/ITES	06	05	11	126	288	414
	Chemicals	—	01	01	—	4000	4000
	Multi Product	—	03	03	—	7080	7080
	Others	01	05	06	44	449	493
	Total	07	14	21	170	11817	11987
8.	Uttar nPradesh						
	IT/ITES	07	03	10	121	164	285
	Pharma/Bio-Tech	—	01	01	—	100	100
	Textiles	—	01	01	—	5310	5310
	Multi Product	—	02	02	—	100	100
	Others	01	03	04	12	280	292
	Total	08	10	18	133	5954	6087
9.	Orissa						
	IT/ITES	03	02	05	230	32	262

Table 1 continued...

		Formal	In-Principle	Total	Formal	In-Principle	Total
	Steel/Metallurgical	02	—	02	547	—	547
	Multi Product	—	02	02	—	2694	2694
	Others	—	03	03	—	1333	1333
	Total	05	07	12	777	4059	4836
10.	Kerala						
	IT/ITES	06	02	08	134	414	548
	Port Based	01	—	01	400	—	400
	Pharma / Bio-Tech	02	—	02	24	—	24
	Others	01	—	01	12	—	12
	Total	10	02	12	570	414	984
11.	Punjab						
	IT/ITES	01	01	02	20	20	40
	Pharma/Bio-Tech	01	01	02	32	100	132
	Engineering	01	01	02	100	140	240
	Textiles	01	02	03	100	260	360
	Multi Product	—	01	01	—	1011	1011
	Others	—	01	01	—	40	40
	Total	04	07	11	252	1571	1823
12.	Rajasthan						
	IT/ITES	03	01	04	90	10	100
	Multi Product	—	05	05	—	12094	12094
	Others	—	02	02	—	147	147
	Total	03	08	11	90	12251	12341
13.	Madhya Pradesh						
	IT/ ITES	04	01	05	71	20	91
	Multi Product	—	04	04	—	7264	7264
	Others	—	01	01	—	2025	2025
	Total	04	06	10	71	9309	9380
14.	Major Indian						
	IT/ITES	138	32	170	4038	2556	6594
	Pharma/Bio-Tech	21	10	31	1946	1299	3245
	Multi Product	13	57	70	17166	107872	125038
	Others	52	58	110	10483	20899	31382
	Total	224	157	381	33633	132626	166259
15.	Total (including all states and union territories (UTs) in India)						
	IT/ITES	145	34	179	4307	2581	6888
	Pharma/Bio-Tech	23	10	33	2090	1299	3289
	Multi Product	16	60	76	17952	114902	132854
	Others	54	61	115	10519	21008	31527
	Total	238	165	403	34868	145000	174658

Source: Compiled data available Ministry of Commerce & Industry, SEZ Section Government of India

Table 2: Category-wise % Share of SEZs to total SEZs approvals and land allotted to them in India up to October, 2006

Categories of SEZs	% share of SEZs to total SEZs			% share of land allotted to SEZs to total land allotted to SEZs		
	Formal	In-Principle	Total	Formal	In-Principle	Total
It / ITES	60.92	20.61	44.42	12.35	1.84	3.93
Pharma / Bio-Tech	9.66	6.06	8.19	5.99	0.93	1.88
Multi-product	6.73	36.36	18.86	51.49	82.20	76.05
Others Categories	22.69	36.97	28.53	30.17	15.03	18.04
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00

Source: Complied data – Ministry of Commerce and Industry, SEZ section Government of India.

Table 3: State-wise approvals of SEZs and land allotted category-wise in India upto October, 2006

S.	State	Percentage share IT/ITES to their respective totals totals		Percentage share of Pharm/Bio-tech to their respective		Percentage share of Multi products their respective totals		Percentage share of Other Categories to their respective totals		Percentage Share of All categories to their respective totals	
		SEZs	Land	SEZs	Land	SEZs	Land	SEZs	Land	SEZs	Land
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra Pradesh	16.76	12.82	24.24	27.43	5.26	5.41	10.43	13.60	13.40	7.57
2	Karnataka	15.08	18.51	12.12	17.64	2.63	1.75	10.43	6.51	11.41	3.55
3	Kerala	4.47	7.96	3.03	0.81	2.63	0.30	0.87	0.04	2.98	0.56
4	Pondicherry	—	—	—	—	1.32	0.26	—	—	0.25	0.20
5	Tamil Nadu	11.17	10.71	3.03	12.36	9.21	3.17	7.83	3.08	9.18	3.60
6	Dadara & Nagar Haveli	—	—	—	—	—	—	0.87	0.02	0.25	0.04
7	Goa	1.12	2.13	6.06	4.88	—	—	—	—	0.99	0.17
8	Madhya Pradesh	2.79	1.32	—	—	5.26	5.47	0.87	6.34	2.48	5.37
9	Maharashtra	12.79	10.46	24.24	10.50	25.00	17.61	22.61	19.76	18.61	17.65
10	Gujarat	1.68	0.78	12.12	18.52	10.53	11.64	13.04	7.45	7.44	10.56
11	Rajasthan	2.23	1.45	—	—	6.58	9.10	1.74	0.46	2.73	7.07
12	Orissa	2.79	3.80	—	—	2.63	2.03	4.35	5.88	2.98	2.77
13	West Bengal	6.14	6.01	—	—	3.95	5.33	6.09	4.05	5.21	6.86
14	Jharkahand	—	—	—	—	—	—	0.87	0.11	0.25	0.02
15	Chandigarh	1.12	1.28	—	—	1.32	1.51	0.87	0.09	0.99	1.21
16	Delhi	1.12	0.02	—	—	—	—	—	—	0.50	0.01
17	Haryana	12.29	17.17	—	—	18.42	31.41	7.83	2.85	11.41	25.09
18	Punjab	1.12	0.58	6.06	4.47	1.32	0.76	5.22	2.00	2.72	1.43
19	Uttaranchal	1.68	0.61	—	—	1.32	0.33	—	—	0.99	2.76
20	Uttar Pradesh	5.59	4.14	3.03	3.39	2.63	0.01	1.35	7.53	4.47	3.49
21	Himachal Pradesh	—	—	—	—	2.63	3.79	0.87	0.01	0.74	2.88
	All India Total	179	6888	33	3289	76	132854	115	31527	403	174658

Source: Complied data ministry of Commerce and Industry, SEZ section Government of India

Table 4: Inter-regional and Intra-regional approvals of SEZs and land allotment in India, Category-wise up to October, 2006

S. No.	Region	SEZ Categories	No. of SEZ approvals	Land allotted (Hec. Approx.	Category-wise percentage share of SEZs and land allotments to their respective regional total	
					SEZs	Land
1	2	3	4	5	6	7
1.	Southern	IT/ITES	85	3444	57.05	12.73
		Pharma/Bio-Tech	14	1720	9.40	6.35
		Multi Product	16	14470	10.74	53.48
		Others	34	7424	22.81	27.44
		Total	149	27058	100.00	100.00
2.	Central	IT/ITES	29	959	32.22	2.35
		Pharma/Bio-Tech	10	454	11.11	1.11
		Multi Product	23	30745	25.56	75.76
		Others	28	8420	31.11	20.78
		Total	90	40578	100.00	100.00
3.	Western	IT/ITES	07	154	17.08	0.50
		Pharma/Bio-Tech	04	547	9.76	1.78
		Multi Product	13	27561	31.70	89.52
		Others	17	2527	41.46	8.20
		Total	41	30789	100.00	100.00
4.	Eastern	IT/ITES	16	676	47.06	4.01
		Pharma/Bio-Tech	—	—	—	—
		Multi Product	05	9774	14.71	57.97
		Others	13	6409	38.23	38.01
		Total	34	16859	100.00	100.00
5.	Nothern	IT/ITES	41	1655	47.12	2.79
		Pharma/Bio-Tech	03	232	3.45	0.39
		Multi Product	21	50304	24.14	84.72
		Others	22	7183	25.29	12.10
		Total	87	59374	100.000	100.00
	All India	IT/ITES	179	6888	44.42	3.93
		Pharma/Bio-Tech	33	3289	8.19	1.88
		Multi Product	76	132854	1886	76.05
		Others	115	31527	28.53	18.04
		Total	403	174658	100.00	100.00

Source: Complied data ministry of Commerce and Industry, SEZ section Government of India

Table 5: Region-wise Percentage share of SEZs and land allocation in their respective totals, Category-wise in India up to October, 2006 (Both formal and in-principal approvals)

S. No.	State	Percentage share of IT/ITES to their respective totals		Percentage share of Pharm/ Bio-tech to their respective totals		Percentage share of Multi products their respective totals		Percentage share of Other Categories to their respective totals		Percentage Share of All categories to their respective totals	
		SEZs	Land	SEZs	Land	SEZs	Land	SEZs	Land	SEZs	Land
1	2	3	4	5	6	7	8	9	10	11	12
1	Southern	47.66	50.00	42.42	58.25	19.74	10.89	29.57	23.23	36.97	15.49
2	Central	16.60	13.92	30.31	15.37	28.95	23.14	24.35	26.34	22.33	23.23
3	Western	3.90	2.24	12.12	18.53	17.11	20.75	15.65	7.90	10.42	17.64
4	Eastern	8.94	9.81	—	—	6.58	7.36	11.30	20.36	8.44	9.65
5	Northern	22.90	24.03	15.15	7.85	27.62	37.86	19.13	22.47	21.84	33.99
	Total Percentage	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Same as in case of Table 1

Table 6: Allotment of land between public sector SEZ corporation and private sector SEZ companies, State-wise in India up to October, 2006

S.	State	Land allotted to public companies/ corporations (Hectares)	Land allotted to private companies (Hectares)	Total Land allotted (Hectares)	Percentage share of land allotted to total land allotted in		Percentage share of land allotted to public, private and total to their respective totals		
1	2	3	4	5	6	7	8	9	10
1	Maharashtra	10251	20578	30827	33.25	66.75	46.87	14.25	18.55
2	Andhra Pradesh	2692	10532	13224	20.36	79.64	12.31	7.29	7.95
3	Karnataka	847	5361	6208	13.64	96.36	3.87	3.71	3.73
4	Haryana	1003	42819	43818	06.69	97.71	4.59	29.65	26.35
5	Tamil Nadu	421	5875	6296	02.29	93.31	1.92	4.07	3.79
6	Gujarat2578	15870	18448	13.97	86.03	11.79	10.99	11.10	
7	West Bengals	—	11987	11987	0.00	100.00	—	8.30	7.21
8	Uttar Pradesh	—	6087	6087	00.00	100.00	—	4.22	3.66
9	Orissa1393	3443	4836	28.80	71.20	6.37	2.38	2.91	
10	Kerala445	539	984	45.22	54.78	2.03	0.37	0.59	
11	Punjab—	1823	1823	00.00	100.00	—	1.26	1.10	
12	Rajasthan	—	12341	12341	000.00	100.00	—	8.55	7.42
13	Madhya Pradesh	2242	7138	9380	23.90	76.10	10.25	4.94	5.64
	Major states in India	21,872	144393	166265	13.51	86.85	100.00	100.00	100.00

Source: Complied data ministry of commerce and Industry SEZ sector, Government of India.

Conclusion

The majority of the IT / ITES are confining to the vicinity of major urban areas since they are capable of overcoming the land limitation by resorting to vertical expansion whereas it is true that the Multi product/services and Other Categories of SEZs by virtue of horizontal expansion require large extent of land (94 per cent of total land allotted to SEZs). Unlike IT/ITES, they need more land to create housing, education, medical and recreation facilities. In addition, they require land to develop social forestry and Effluent Treatment Plants (ETP) as 'mandatory in the Environmental Protection Acts. But the justification of providing exemption from labour laws. Giving the industrialists power to exploit the workers and force them to work in inhuman conditions shall be violative of Article 38(1) of our Constitution.

Instead of directly allotting land to the private SEZ developers, the governments may develop and allot the land taking their actual requirement into consideration. By following this process, it is possible to curb the extraneous tendencies. This is in vogue in other developing countries like China. SEZs must be seen in the context of an overall strategy to promote private sector led growth rather than as a substitute for a good investment climate. Moreover, the SEZs cannot be looked at as a panacea for all economic diseases.

In case of employment also, whatever additional employment (skilled manpower) we get due to SEZ establishments may not compensate the loss of employment at the primary sector level. . Hence, utmost caution should be exercised while allotting land to SEZs, otherwise our primary objective of setting up these SEZs will be jeopardized. If there are widespread protests against the establishment of SEZ in a particular area, the governments may interact with stakeholders of the SEZ, including the developers of the SEZ, government agencies, elected representatives, concerned heads of government departments, NGOs and Project Affected Persons (PAPs). After analysing their submissions and detailed deliberations the governments may de-notify a particular SEZ.

REFERENCES

Aiyar, S.S.A. 2006. SEZs: The good, bad and ugly, http://economictimes.com

Amit Abhyankar. 2006. Special economic zones, www. Sulekha.com

Aparna Shivapuri Singh. 2006. India's tryst with special economic zones. www.opinionaisa.org.

Aradhana Aggarwal. 2006. Special economic zones (SEZs): revisit the policy debate. *Economic and Political Weekly*, November 4.

Asim Kumar Mukarjee. 2008. SEZ and its impact. *The Management Accountant*, 43(1) January: 15-17.

CII. 2006. Special economic zones (SEZs): engines for growth. www.ciolonline.org/northrn

GOI. 2006. Implementation of the provisions of the SEZ, At, 2005 Rules, 2006. Ministry of Commerce & Industry, Department of Commerce (SEZ Section)

Jayasree Sengupta. 2005. Myths surrounding special economic zones, Observer, Research Foundation. http://www.observerindia.com

Kwan-YiuWong and K.Y. David Chu. 1984. Export processing zones and special economic zones as generator of economic development: The Asian experience. *Human Geography*, 66(1).

Manoj Pant. 2006. SEZs: fact and fiction. http://economicstimes.indiatimes.com

Parliamentary Standing Committee on Commerce. 2007. The functioning of special economic zones.

Planning Commission. 2006. An approach to the 11th Five Year Plan, December, 2006

Praful Bidwai. 2006. The great land grab. *Frontline*, 23(18). http://www.frontlineconnet.com

Ruddar Datt. 2006. Special economic zones (SEZs), *Main Stream*, November 11, 2006.

Singh, J.P. 2005. Special economic zones: do they create sustainable value? www.visionriviewpoint.com

Venu, M.K. 2006. Farmers have a stake in growth. http://economictimes.com