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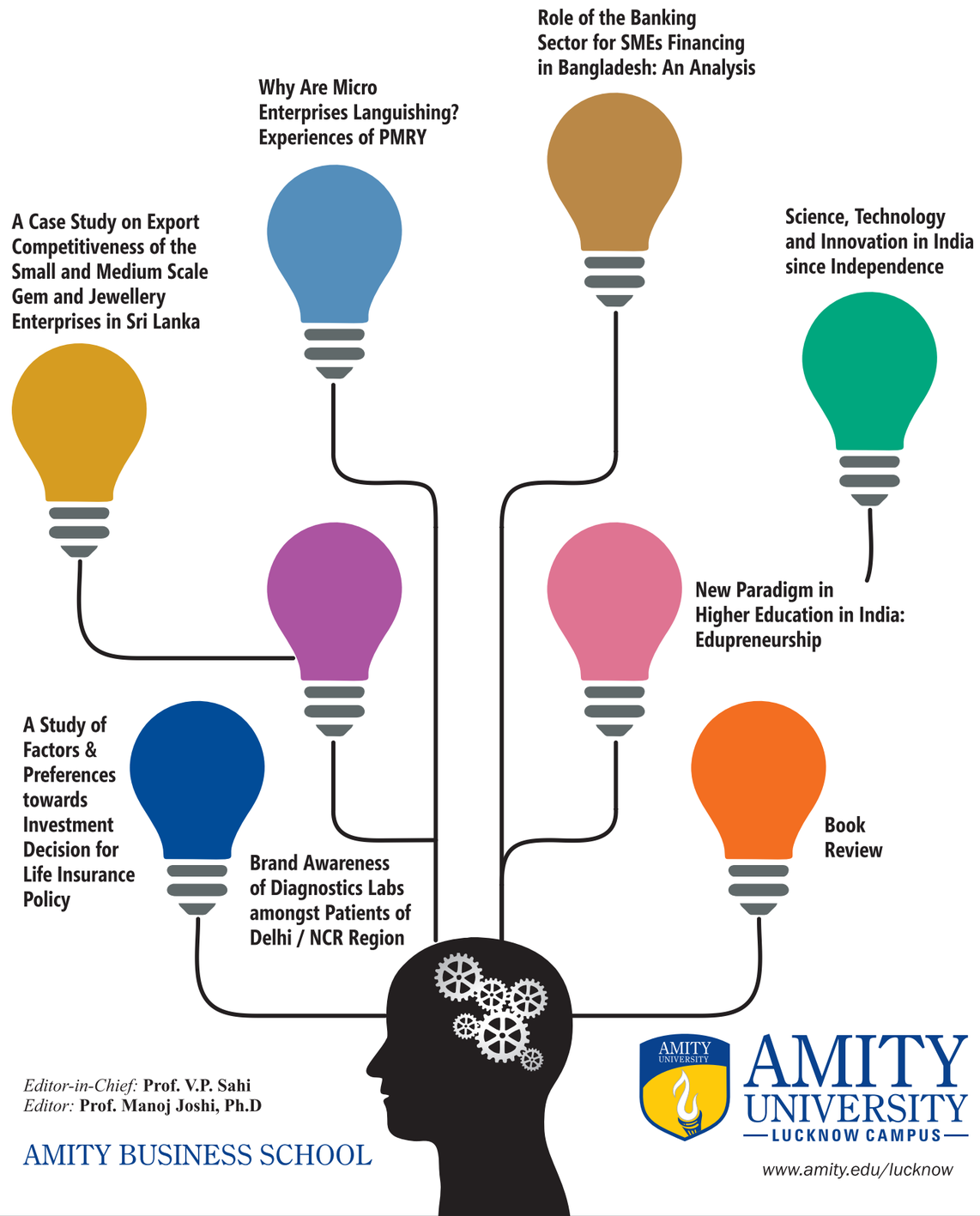

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A Case Study on Export Competitiveness of the Small and Medium Scale Gem and Jewelry Enterprises in Sri Lanka

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The factors affecting the export competitiveness of Small and Medium scale Enterprises (SMEs) are apparent to be very complex and hard to ascertain. From the firm's point of view the trading environment on which SMEs conducts its business play an important role. Thus, a trade-enabling environment, based on adequate trade policies, an efficient trade and customs administration and good infrastructure are critical for enterprises to compete effectively in the competitive global market. Today competition in international trade has become more innovation and knowledge intensive. Especially, country's trade performance goes beyond the parameters of the traditional comparative advantage paradigm. Therefore, this study aims to contribute to the assessment of export competitiveness by investigating the influence of firm and industry specific characteristics in the Gem and Jewelry products sub sector in Sri Lanka. Structured questionnaire survey followed by descriptive and inferential statistical analysis was performed to identify the key factors for the export competitiveness. This study revealed that the firms' export orientation, human capital and technological capabilities have significant relations to the export competitiveness. Furthermore, the government policy, freight facilities and distribution, product variability, research and development, export market promotion attitudes at the industry and firm levels have significant impact for the export competitiveness.

Keywords: Export Competitiveness, Technology Management, Small and Medium Enterprises; SMEs, Gem and Jewelry, Sri Lanka.

Introduction

The importance of export as an economic activity and a driver of economic growth have long been established in various research endeavours. An international competition become more innovation and knowledge based, understanding trade performance went beyond the parameters of the comparative advantage paradigm and stressed the role of technology in affecting international competitiveness (Mytelka, 2000). Despite of developing or a developed country the exports bring about measurable positive results to the economies. The flourishing export sector tends to improve the quality of the life of people in a country. There is no proper evidence for systematic studies to identify factors affecting export competitiveness of the SMEs previously, for the Gem & Jewellery (G&J) sector in Sri Lanka. In order to address the rationale, the literature survey paved the way and provided guidance to build a suitable conceptual framework for the study. This prominent industry offers competitive products capable of capturing premium value in the global market with the image built over the long history could not able to develop the exports up to the anticipated level up to now. Focusing on the role of SME's in shaping international competition, a critical observation made is that most of the firms face the same macroeconomic condition yet these firms respond & perform differently in their export activities. Therefore certain countries are dominating the most of the product sectors by achieving economics of scale by mass scale of production. As such the SMEs operating in the developing countries like Sri Lanka have to be strategically handling their business to achieve the success in export endeavours. In order to survive in the respective business fields it is necessary to adopt the new technology, new strategy in an appropriate manner to achieve the competitive advantage. It has in vital importance to find out the factors affecting export competitiveness in this potential product sector as nowadays the manufacturing & business sectors have become more competitive, dynamic and complex with the rapid globalization.

Research Objectives

1) Overview of the G&J sector in Sri Lanka & existing mechanism of establishment for exporting Gem & Jewelry products

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2) Ascertain the factors affecting for the export competitiveness of SMEs operating in G&J product sector in Sri Lanka

3) To recommend policies and strategies to overcome obstacles & enhance export Competitiveness of this industry

Research Methodology

The study was carried out through a survey of SMEs structured questionnaire. A conceptual model was designed based on literature review. The questionnaire was distributed among a randomly selected sample to collect data.

Conceptual Model

The framework developed by mainly using the two models previously developed by (Cavusgil and Zou, 1994) & Michael Porters, Diamond model. The conceptual model included only one dependent variable & many independent variables.

Population frame & sampling

Approximately 150 SMEs are operating in the G&J industry by managing sustainability in long term basis based on their experience, operating capability, technological capability etc. Total population and sampling frame can be considered as 150 units. The majority of the SMEs in the sector operate their business based on Colombo & Ratnapura districts especially due to available far better infra-structure facilities and positive environment for export business. Sample size of the study is 100 it is selected based on simple random sampling. Respondents are main owners of this business.

Research Instruments

Step 1- Exploratory study about SMEs and exporting mechanism of establishment

Discussions & interviews conducted with SMEs in the G&J industry and also with related officials in key stake holders. Information and data available at the EDB and National Gem and Jewelry Authority (NGJA) was utilized effectively.

Step 2 Pilot survey

A questionnaire is used to collect the required data for the research. The questionnaire is developed

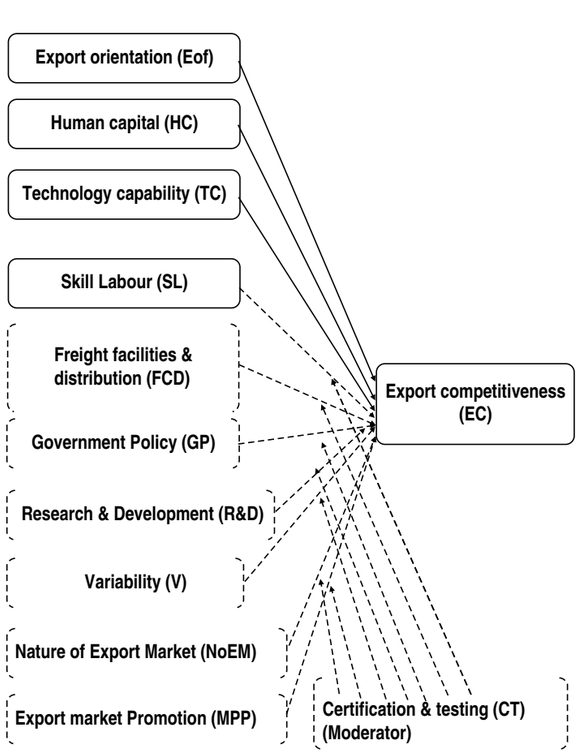

Figure 1; Shows the conceptual model developed
--------- Denoted by Moderation effect by Certification & Testing
Source; Structured Questionnaire Survey

using the items used to operationalize the variables shown in Table 2. The questions used in the questionnaire were adopted from relevant prior research. The adopted items are validated and wording changes are made to tailor the instrument to match easy understanding of the target sample of the study

Step 3 Structured questionnaire survey

The data collection for the research was planned to be instrumental in terms of a questionnaire. Five point likert scale questionnaire was developed for the survey.

Questionnaire framework

Based on the knowledge acquired from the research done by the reputed researchers previously in the intended product sector and related other product sectors to determine the export competitiveness of the SMEs over the past period and our own experience was used to design the structured questionnaire.

Data collection procedure

Besides the feedback received via mails the EDB officers attached to the provincial officers and the head office supported the research by providing several sets of data.

Data analysis

The analysis of the data was carried out by using the Statistical Package for Social Sciences (SPSS) version 17.0. Analysis based on the descriptive statistics was used to examine the characteristics of the sample. Specially checked export orientation surveyed sample at the firm level in order to assure the quality of the sample data. Pearson correlation and regression analysis is performed to test the hypotheses derived & developed the conceptual model. Conceptual model is further improved by using the moderator analysis.

Validity & reliability

Factor analysis was used to measure the validity of the collected data. Factor analysis attempts to identify underlying variables that explain the pattern of correlations within a set of observed variables. All the Cronbach's alpha values under the reliability statistic are greater than 0.6 then it can be concluded that the data are reliable.

Correlation analysis

Pearson Correlation Analysis used in order to identify the linear associations between the variables of the conceptual model. The significance of correlation coefficients were tested at $\alpha = 0.01$ & 0.05 (2-tailed) comparing to the "p" (probability) value generated by SPSS outputs.

A correlation coefficient gives us the indication of strength of the relationship between the variables and also the direction of that relationship. It does not indicate whether that relationship is statistically significant or not. There is a rough guide to interpret the correlation coefficients in terms of strength of relationship:

Table 2 : Operationalization of Variables / Constructs, Indicators

Variable / Construct	Indicator	Literature
Share of exports (SoE)	% of total sales	(Bleaney and Wakelin 1999)
Human capital (HC)	No of employees engaged in export business as a % of total employees	(Alvarez, 2002) (Wignaraja, 2002) (Sarpong and Wolf 2004), (Analoui, 1998a), (Nelson, 1981)
	Trained Workforce	
	Designing capability	
	Operating capability	
Technology capability (TC)	Resource availability	Lefebvre and Lefebvre 2001 (Porter 1980, Aaker 1988) Montobbio and Rampa, 2005 (Mytelka 2000)
	Communication ability	(Porter 1980, Aaker 1988) Montobbio and Rampa, 2005 (Mytelka 2000)
	Technology use	(Porter 1980, Aaker 1988) Montobbio and Rampa, 2005 (Mytelka 2000)
	Commercial capability	Lefebvre and Lefebvre 2001 (Porter 1980, Aaker 1988)
Production capability (PC)*	No of units produce	(Porter 1980, Aaker 1988)
International experience (IE)*	No of years in the export business	(Douglas and Craig 1989) , (Rasiah, 2003; Iyer, 2010)
Quality (Q)*	Good value	Burton and Schlegelmich (1987) and Christensen et al, (1987)

Variable / Construct	Indicator	Literature
Variety (V)	Range of products	Grossman and Helpman (1991) (Terpstra and Sarathy, 2000)
	No of designs	Grossman and Helpman (1991)
	Customer attraction	Kirpalani and Mac Intosh,1980
Value addition (VA)*	As a % of raw materials	Hitt et al. (2000)
R & D (RD)	R & D Expenditure	Montobbio and Rampa, 2005
	New innovations	-Do – Mingus et al. (2007)
	Transfer of new findings to the industry	Montobbio and Rampa, 2005
Skill labor (SL)	Availability of labour	Abrenica and Tecson (2003)
	Labour charges	-Do - Labour productivityVan Dijk (2002)
Standardization (S)*	Homogeneity of products	(Cavusgil and Zou, 1994)
Import duty (ID)*	Rate of import duty	(Irangani B G, 2009)
Nature of the export market (NoEM)	Market opportunity	(Douglas and Craig 1989)
	Market competition	Cavusgil and Zou (1994)
	Branding	(Douglas and Craig 1989)
Freight facilities / Distribution (FCD)	Quality of the service	Aaby and Slater (1989)
	Documents to be filled	-Do -
	Time consumed	-Do -
Market/ Product promotion (MPP)	No of trade fair participation	Kirpalani and Mac Intosh,1980 Lee and Zhou (2000), Jensen and Pompelli (2000)
	Cost of advertising	Kirpalani and Mac Intosh,1980
	Overall view on marketing to create export oppotunities	Lee and Zhou (2000)
Government Policy (GP)	Government regulations on issuing licenses & environmental regulations	(Hoff et al., 1997)
Environment factors (EF)	Currency fluctuation	Baldaunf et al., (2000)
Certification & testing (CT)	Charges of testing Speed of the service Buyers perception	Abdul-Aziz et al. (2000)
Technology transition (TT)	Product technology Process technology expedite	(Porter 1990) Aaby and Slater (1989)
Export competitiveness (EC)	Demand for exports Last year exports Compared to year before	(Porter 1990) Aaby and Slater (1989) Cavusgil and Zou (1994)
	Current exports compared to year before	(Porter 1990) Aaby and Slater (1989) Cavusgil and Zou (1994)
	Gross profit of exports compared to year before	(Porter 1990) Aaby and Slater (1989) Cavusgil and Zou (1994)
	Perceived success of exports	Cavusgil and Zou (1994) and Julian (2003)
	Overall profitability over last five years	Cavusgil and Zou (1994) and Julian (2003)
	Average annual sales growth rate	Cavusgil and Zou (1994) and Julian (2003)
	Initial strategic objectives were met	Cavusgil and Zou (1994) and Julian (2003)

Source: Structured Literature Survey

Table 3; Summary of Factor Analysis & Reliability Analysis

Variable	Item	Component	Acceptance of variable	Cronbach's Alpha
Human Capital (HC)	HC2	0.815	Accepted	0.715
	HC3	0.649	Accepted	
	HC4	0.841	Accepted	
	HC5	0.848	Accepted	
Technological Capability (TC)	TC7	0.589	Accepted	0.648*
	TC8	0.874	Accepted	
	TC9	0.809	Accepted	

Variable	Item	Component	Acceptance of variable	Cronbach's Alpha
Variability (V)	V13	0.798	Accepted	0.784
	V14	0.927	Accepted	
	V15	0.809	Accepted	
Research & Development (RD)	RD17	0.653	Accepted	0.768
	RD18	0.921	Accepted	
	RD19	0.887	Accepted	
Skill Labour (SL)	SL20	0.807	Accepted	0.591*
	SL21	0.809	Accepted	
	SL22	< 0.500	Rejected	
Nature of Export Market (NoEM)	NoEM25	< 0.500	Rejected	0.653*
	NoEM26	0.862	Accepted	
	NoEM27	0.862	Accepted	
Freight Facilities & Distribution (FCD)	FCD28	0.655	Accepted	0.607
	FCD29	0.676	Accepted	
	FCD30	0.900	Accepted	
Market Promotion (MPP)	MPP31	0.912	Accepted	0.797*
	MPP32	0.912	Accepted	
	MPP33	< 0.500	Rejected	
Certification & Testing (CT)	CT35	0.860	Accepted	0.647*
	CT37	0.860	Accepted	
Government Policy (GP)	GP39	0.596	Accepted	0.725
	GP40	0.930	Accepted	
	GP41	0.865	Accepted	
Export Orientation at Firm Level (EOf)	SoE1	0.675	Accepted	0.617
	PC10	0.922	Accepted	
	Q12	0.702	Accepted	
Export Competitiveness (EC)	EC42	0.644	Accepted	0.777
	EC43	0.602	Accepted	
	EC44	0.825	Accepted	
	EC45	0.756	Accepted	
	EC46	0.677	Accepted	
	EC47	0.561	Accepted	
	EC49	0.561	Accepted	

Source: Structured Questionnaire Survey

Table 4; Interpretation of Correlation Coefficients in Terms of Strength of Relationship

Correlation Coefficient	Strength of Relationship
0.0 – 0.2	Very weak, Negligible
0.2 – 0.4	Weak, Low
0.4 – 0.7	Moderate
0.7 – 0.9	Strong, High, Marked
0.9 – 1.0	Very Strong, Very High

Source: Student User Guide to the SPSS

Table 5; Results of Correlation Analysis

HC Pearson Correlation Sig. (2-tailed) N	1 100	TC								
TC Pearson Correlation Sig. (2-tailed) N	.245* 0.014 100	1 100	RD							
RD Pearson Correlation Sig. (2-tailed) N	0.001 0.991 100	.475** 0.000 100	1 100	V						
V Pearson Correlation Sig. (2-tailed) N	.676** 0.000 100	-.212** 0.034 100	-.458** 0.000 100	1 100	SL					
SL Pearson Correlation Sig. (2-tailed) N	-.366** 0.000 100	-0.046 0.652 100	-0.036 0.720 100	-.487** 0.000 100	1 100	NoEM				
NoEM Pearson Correlation Sig. (2-tailed) N	.207* 0.038 100	.910** 0.000 100	.496** 0.000 100	-.240* 0.016 100	-0.137 0.175 100	1 100	MPP			
MPP Pearson Correlation Sig. (2-tailed) N	-0.024 0.815 100	.590** 0.000 100	.525** 0.000 100	-.331** 0.001 100	0.131 0.194 100	.681** 0.000 100	1 100	FCD		
FCD Pearson Correlation Sig. (2-tailed) N	.230* 0.021 100	0.122 0.226 100	-0.058 0.565 100	.517** 0.000 100	-0.173 0.085 100	0.044 0.664 100	0.009 0.926 100	1 100	GP	
GP Pearson Correlation Sig. (2-tailed) N	-0.073 0.468 100	.534** 0.000 100	0.17 0.090 100	-412** 0.000 100	.465** 0.000 100	.475** 0.000 100	.279** 0.005 100	0.015 0.879 100	1 100	EOf
EOf Pearson Correlation Sig. (2-tailed) N	.793** 0.000 100	.432** 0.000 100	0.064 0.526 100	.421** 0.000 100	-.214* 0.033 100	.394** 0.000 100	.148 0.142 100	.299** 0.002 100	.209* 0.037 100	1 100	EC
EC Pearson Correlation Sig. (2-tailed) N	.732** 0.000 100	.582** 0.000 100	.268** 0.007 100	.254* 0.011 100	-.388** 0.000 100	.562** 0.000 100	.246* 0.014 100	0.086 0.395 100	0.183 0.068 100	.791** 0.000 100	1 100

*** . Correlation is significant at the 0.05 level (2-tailed).**

****. Correlation is significant at the 0.01 level (2-tailed).**

Source: Structured Questionnaire Survey

Correlation coefficient gives the indication of relationships among the dependant variables and also their relationship with the independent variable at the significant level of 0.01 and 0.05.

Regression Analysis

Correlation itself does not explain all the relationships between variables in a research study. Regression analysis was used to notify the variables which have significant contributions to export competitiveness of the SMEs in the G & J product sector.

The correlation coefficient (R) is a measure of the linear association between variables. R value is 0.907 and closer to 1. In this model unadjusted R square is 82.3%. Adjusted R2 represents the proportion of variance of the dependent variable that could be explained by its causing independent variables. Export orientation (EOf), nature of export market at the firm level NoEM), skill labour (SL), human capital (HC), freight facilities and distribution (FCD), research and development (R&D), export market promotion at the industry level (MPP), government policy (GP), technological capability

(TC), and product variability (V) are found to be significant determinants of the export competitiveness of the firms, explaining 80.3% of the total variance. The ANOVA table for the overall regression shows that, F = 41.261 with 10 and 89 degrees of freedom, with a probability (in the Sig column) well below 0.05. The regression is significant.

Influence of Certification and Testing

Certification and Testing has been considered as a moderator variable in previous research studies done for the measurement of competitiveness. The variables, which are not significant relation at the 0.05% confidence interval, by the regression and hypothesis testing check using the moderator analysis.

Table 6: Model Summary- Regression Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Df1	Df2	Sig. F Change
1	.097[b]	.823	.803	.17243	.823	41.261	10	89	.000

Source: Structured Questionnaire Survey

Table 7: ANOVA Results- Regression Analysis

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.267	10	1.227	41.261	.000[a]
	Residual	2.646	89	.030		
	Total	14.913	99			

a. Predictors: (Constant), EOf, RD, SL, FCD, MPP, GP, TC, HC, NoEM,V

b. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 8: Moderation Effect Coefficients - (RD)

Coeffcients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.572	.306		8.402	.000
	RD	.410	.155	.389	2.636	.012

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 9: Moderation Effect Coefficients- (MPP)

Coeffcients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.716	.236		11.517	.000
	MPP	.164	.066	.314	2.493	.016

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 10: Moderation Effect Coefficients- (SL)

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.324	.295		18.067	.000
	SL	-.643	.095	-.736	-6.798	.000

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 11: Moderation Effect Coefficients- (V)

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.566	.320		8.016	.000
	V	.168	.073	.292	2.301	.025

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 12: Moderation Effect Coefficients- (NoEM)

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.386	.314		7.588	.000
	NoEM	.246	.084	.361	2.919	.005

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 13: Moderation Effect Coefficients- (FCD)

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.307	.362		6.368	.000
	FCD	.311	.113	.342	2.746	.008

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Table 14: Moderation Effect Coefficients- (GP)

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.874	.186		15.459	.000
	GP	.141	.061	.294	2.319	.024

a. Dependent Variable: EC

Source: Structured Questionnaire Survey

Certification and Testing has a significant moderation effect on the relationships between NoEM & EC, FCD & EC and MPP & EC at the 0.01 significant levels. It also found that Certification and Testing has a significant moderation effect V and EC and GP & EC at the 0.05 significant levels.

Research Approach and Hypothesis

Based on the conceptual model and key objectives of the research hypotheses are developed as listed in Table 15.

Table 15 : Research Hypothesis

Identifier	Hypothesis
H1a	Higher the export orientation at the firm level higher the export competitiveness at of the firm
H2a	Higher the human capital at the firm level higher the export competitiveness of the firm
H3a	Higher the technological capability of the firm higher the export competitiveness of the firm competitiveness of the firm
H4a	Higher the R & D effort at the industry level higher the export competitiveness of the firm
H5a	There exists a positive relationship between product variability at the firm level and export competitiveness of the firm
H6a	Higher the skill labour facilities at the industry level higher the export competitiveness of the firm
H7a	Higher favorable export market conditions at the firm level higher the export competitiveness of the firm
H8a	Higher the freight and distribution facilities at the industry level higher export competitiveness of the firm
H9a	Higher the market and product promotion at the industry level higher export competitiveness of the firm
H10a	Higher the favorable government policy at the industry level higher export competitiveness of the firm

According to the above results all the hypothesis can be accepted except H6a.

The model developed by the research to achieve the success of export competitiveness is,

Success of the Export Competitiveness = 2.394 + 0.240*(EOf) 0.149*(FCD) + 0.058*(GP) + 0.224*(HC) + 0.194* (TC) + 0.042*(RD) 0.134*(V) 0.205*(SL) - 0.057*(NoEM) + 0.019*(MPP)

Findings

The gem industry in Sri Lanka is of great antiquity. Reference is made in the scriptures to gems being brought from Ceylon to the Court of Solomon. The entire industry employs approximately 650,000 persons including miners, cutters and polishers, dealers, jewellery designers, manufacturers and craftsmen, marketers and sales people (as per the articles published by the NGJA). The gem industry employs around 325,000 miners, 72,000 gem cutters and 300 gem exporters. Methods of gem cutting and polishing comprise both traditional method of handcrafting and the electronic methods of state-of-the art lapidaries.

The study revealed that the existing set-up for exporting the G & J products, supported by special facilities such as A T A Carnet system, GSP scheme etc. A T A Carnet system facilitates benefits for the participants of developing countries to promote their products by participating the overseas trade fairs. G & J exporters in Sri Lanka should have to follow a set of procedures to export their G & J items. The efficiency of the supply chain of exports may influence by outcome of the key stake holders of government, individual firm specific factors, general trading environment & government regulations etc. It is also found that approximately 200, G&J exporting firms categorized under SMEs. About 150 SMEs are continuously engaged in the business over 10 Yrs period of time.

Main certification and testing facility provider to the industry is NGJA meanwhile several private testing laboratories also operating to serve the purpose. Key government stake holder of the G&J sector is NGJA but there are numerous stake holders holding responsibilities with regard to customs, marketing, environmental & forestry regulations, geological and mining regulation activities etc. In the process of exporting G & J products the exporter has to come across the cumbersome procedure with respect to export documentation, testing and certification, custom regulations etc. With regarding the marketing perspective the role plays by the EDB seems to be important as even the prominent exporters of the industry also seeking the EDBs assistance to improve their exports.

Correlation analysis followed by regression analysis and hypothesis testing revealed that the EOf, HC, TC at the firm level is significant and positively correlated with the export competitiveness. This study reveals that export orientation, human capital and technology capability at the firm level are key determinant of the export competitiveness of the SMEs operating in the Sri Lankan G & J sector.

Moderation role by certification and testing (C&T) is significant on many of the relationships such as

FCD, NoEM, MPP, GP, V etc. With moderation by certification and technology FCD, NoEM, MPP, GP, V has shown strong positive relationship with the export competitiveness. This finding also further justifies the subsequent interviews with the Proprietors of the exporting firms and experts of the governing stake holders such as NGJA and EDB. They justify that the C & T by an international organization make a significant impact on foreign buyer.

The analysis also shown that the majority of the firms are relying on their own export marketing efforts at the firm level as well as export market promotion efforts by the BDS organizations such as the EDB & NGJA etc. The majority of the firms believe that their training budget will have influence the technical skills & capabilities of the staff but subsequent discussions reveals they basically depend on the training facilities provided by the BDS organizations. The majority of the firms state R & D budget of the government is not sufficient to enhance the export competitiveness of the G & J sector of Sri Lanka. They also state new innovations resulted by research and development is not sufficient and those innovations do not transfer to the firm level. Product branding & enhancing the country image through the marketing campaigns are essential as per the view of the majority of the firms.

Recommended Strategies and Policies

Findings of this study revealed that the strategies like marketing, trade hub Strategy, R&D, adaptation of state to art technology, product standardization. Proposed policies include identification of need for developing industry at the national level, establishment of proper regulatory framework, provide the decision making powers for the key stake holders avoiding duplications and reduce time laps in the supply chain.

Implications & Conclusions

Literature survey revealed majority of the exporting firms operating in the G&J industry in Sri Lanka are SMEs. It is highly essential to improve level of export competitiveness of these firms to be achieved the sustainable improved performance in future. The study reveals that variables or constructs which may significant to influence the export competitiveness may vary on many parameters. Inter correlation between the key stakeholders who has direct influence to the supply chain of the G&J exports are key to the success. G&J sector is one of the prominent product sectors to be improved to diversify the exports.

To raise the export competitiveness of the Sri Lankan G&J industry the remedy is to undertake immediate reforms in respect of three major areas (EO, NC and TC) is essential. It is also vital to improve the C&T facilities simultaneously with research and development, freight facilities and distribution, export market promotion by firm level and industry level, government policy and product variability in order to improve the export competitiveness.

Limitations of the Research

In this research as the measurement tool, we used the five point likert type questionnaire but similar studies previously done by Cavusgil and Zou (1994) and Julian (2003) to evaluate the export competitiveness of the industries has used 10 point likert scale questionnaire. But 10 point likert type questionnaire is considered to be very sensitive and such slight variations in the questionnaire could not be effectively detected by the SMEs in the Sri Lankan industry.

The present study is limited only one of the prominent product sector and analysis has done considering product specific, market specific features unique to the Gem & Jewellery product sector. As a result of this, the results of the present study cannot be extrapolated to other similar product sectors operating in the similar market conditions.

International and local classification of the product sectors by the relevant trade institutions including ITC has merged the Diamonds into the G&J sector. Therefore, it has limitations & difficulties in finding G&J statistics along.

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Why are Micro Enterprises Languishing? – Experiences of PMRY

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Micro, Small & Medium Enterprises (MSME) sector contributes substantively in terms of output, GDP, employment and exports. It helps bring about decentralised form of production of goods, services, promote equity and can have significant spin off that may generate forward and backward linkages. However, this sector faces numerous challenges both from demand and supply sides. In the milieu of competitive environment, this sector faces more serious challenges where business environment is less friendly which constrict significantly the growth of this sector. The survey results palpablydemonstrates that experiences ofthe Prime Minister's RozgarYojana (PMRY) are not very encouraging in terms of utilisation of capital, survival of units, product base, profitability, training and skills, employment and incomes. Clearly, paper suggests that in a competitive environment only those enterprises should be promoted which have potential for growth or having high market demand. Most often, micro enterprise have to face competition both in the product and labour markets from the formal sector enterprises, particularly from the larger units who have advantage of economies of scale. It would, therefore be important from policy perspective to promote those enterprises having linkages with formal sector enterprises.

Key Words : MSEs,investment variability,performence of enterprises, employment generation, productivity syndrome

Introduction

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialisation of rural and backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socio-economic development of the country (GOI, 2015).

MSMEsector accounts for about 8 percent to GDP and contributes almost 45 percent of the manufacturing output while its share accounts for 40 percent of export to the economy (GOI, 2015). In terms of employment it is largest employment provider next only to agriculture. The most employment intensive segments are food products followed by non-metallic mineral products and metal products. MSMEs have grown to 36.17 million units providing employment to 80.52 million persons during 2006-07 (Figure 1). The sector represents an average annual growth rate of 4.38 percent in the number of these units; and growth of 4.75 percent in employmentafter fourth census of MSMEs till 2014(Figure 2). The annual growth rate of total fixed assets of the sector (market value) has reached to 7.43 in 2013-14 from 6 percent in 2007-08 (Figure 2). Output of this sector has recorded an average annual growth rate of 8.36 percent during 2006-07 to 2012-13 (GOI, 2015).

Micro and small enterprises (MSEs),a segment of MSME sector, have a significant share in overall sector and play an important role in creation of employment, more equitable distribution of income, reducing the imbalances and disparities in rural and urban areas. The larger significance of this sector lies in sub serving simultaneously broader social and economic objectives. MSEs comprise divergent set of industries, ranging from the micro enterprises, using rudimentary technology on the one hand to the modern small-scale industries using sophisticated technology on the other. There is large diversity and heterogeneity within different segments of this sector. Typically, a large majority of these enterprises are small in terms of employment and plethora of them also work on single person enterprise with informal structure and family ownership which are engaged in production of variety of goods and services, primarily consumer goods. Production is generally carried out on a small scale with modest capital use and has limited functions and specialisation. The product range is highly diversified and linkages in terms of sub-contracting arrangements to large industry are limited.

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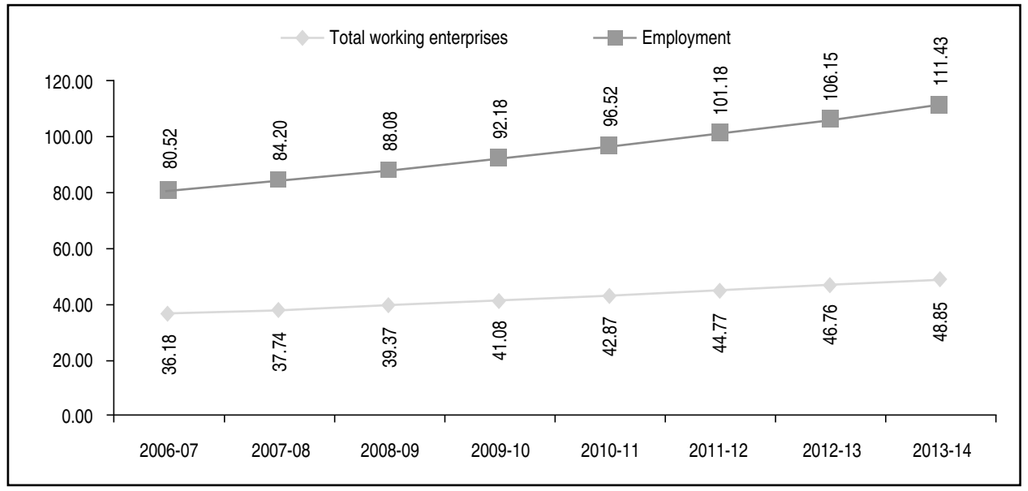
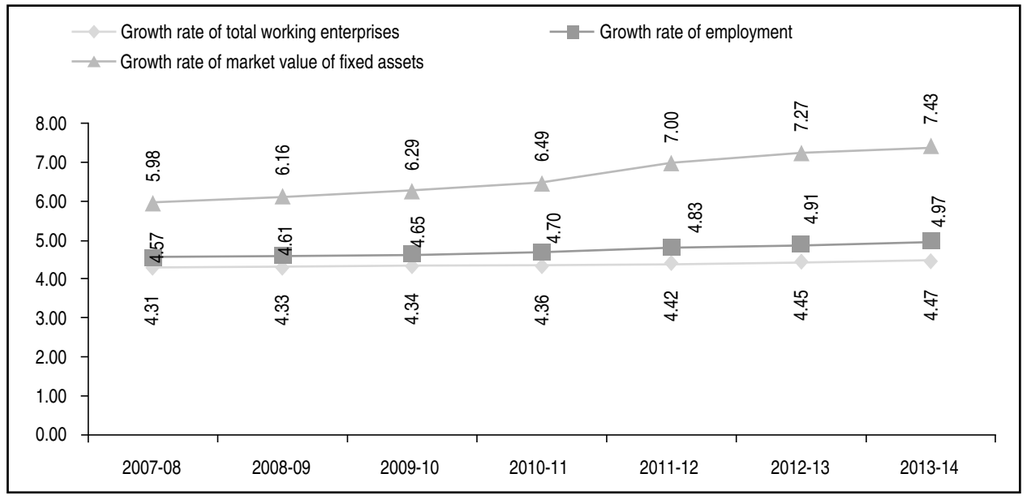
Figure 1: Total working enterprises and employment in MSME sector (in millions)



Source: MSME, Annual Report 2013-14 & 2014-15.

Figure 2: Growth of MSME sector



Source: MSME, Annual Report 2013-14 & 2014-15.

According to fourth All India Census of Micro, Small and Medium Enterprises (2006-07), out of total 1.56 million units, about 1.48 million units fall under the micro and about 76 thousand units fall under the category of small units which jointly accounts for more than 99 percent of the total MSME sector. In terms of total employment of MSMEsector,MSEs provide jobs to about 96 percent in which share of micro is alone 71 percent of total under the registered category. The MSME sector hasgross output of Rs. 7075billionof which small enterprise have share of 45 percent followed by micro with share of 44 percent. In case of assets, MSME sector accounts for Rs. 4491billion and out of it 90 percent share belongs to MSEs.

In case of unorganised sector, the census reported that total number of units of MSEs are19.9 millionout of which share of micro enterprises is 99.8 percent and rest are small enterprises. The unorganised MSEs provide employment to 40.88 million, with gross output of Rs. 3697 billion, and with a fixed investment of Rs. 2,408 billion.

What really drives this sector? The major determinants can be analysed both from demand and supply side factors. A substantively large part of demand comes from those individuals and households who derive their incomes from the unorganised sector and indeed overwhelmingly large majority workers (92 percent) work in this

sector. Even those who derive their income from organised sector also demand the goods and services of MSEs. It has been generally observed that as the income of household rises the demand of these goods and services also rises. A second source of demand stems from the linkages with other sectors (agriculture or large industries). Though linkages generally appear to be sparse for majority of enterprises yet some modern enterprises have such linkages to large industries in the form of sub-contracting arrangements. As regards supply side factor, it is generally regarded that MSEs are efficient in the use of resources compared to medium or large industries. Also, employment and output per unit of capital, which can be regarded measure of efficiency, are higher in comparison to medium and large industries.

The significant changes noticed in the growth of small sector units are increasing intensity of closed units and substantial decline in employment per unit. Per unit employment declined from 6.3 in 1987-88 to 4.5 in 2001-02. This decline continued and reached to 2.06 in 2006-07.Across states, majority of states have experienced a fall in the share of working units and the consequent rise in the share of closed units. Employment per unit has declined in almost all the states. In recent years the performance of this has declined, which is believed to be as a result of opening up of the economy. This raises the central concern for creating an environment conducive to business and removing policy constraints. Researches haveshown that small and medium enterprises (SMEs) and micro enterprises have to face increasing competition in the present scenario of globalisation, they have to specifically improve themselves in the fields of management, marketing, product diversification, infrastructural development, technological up gradation. Moreover, new small and medium enterprises may have to move from slow growth area to the high growth area and they have to form strategic alliance with entrepreneurs of neighbouring countries (Mali, 1998).

It also highlighted the impact of globalisation and domestic reforms on small-scale industries sector. Subrahmanya, 2004 stated that small industry had suffered in terms of growth of units, employment, output and exports. The researcher highlighted that the policy changes had also thrown open new opportunities and markets for the small-scale industries sector. He suggested that the focus must be turned to technology development and strengthening of financial infrastructure in order to make Indian small industry internationally competitive and contribute to national income and employment. Scholars have also analysed the performance of small scale industry in India and focused on policy changes which have opened new opportunities for this sector. It is brought to the fore that in order to boost SSI growth technology development and strengthening of financial infrastructure are crucial (Singh et al., 2012). The concerns and measures to overcome difficulties of this sector are well documented even in the highest policy levels (Government of India, 2010). There are evidences to show that reforms, including that of labour laws and regulation, have positive impacts in business environment of micro and small enterprises which eventually help boost their growth (ILO,2006). This sector has performed a remarkable role of social inclusion, and promote employment and reduce income inequalities in the world (ISED,2014). Despite the fact that this sector contributes substantively in terms of GDP, employment and exports yet there is still a huge institutional finance gap that requires appropriate policy interventions and support tothis sector (IFC, 2012).

The paper has been structured into six sections. The first section deals with the overview of MSME sector and second section describes the objectives and methodology. The third section illustrates the profile of enterprises and the fourth section analyses economics of enterprises.Fifth section discusses the reasons for poor performance and the final section suggests strategiesand analyse the policy imperatives.

Objectives and Methodology

The paper is aimed at exploring the following issues based on empirical evidences.

(i) What are the social and economic profiles of entrepreneurs in terms of social groups, type of activity, capital used, skill and training acquisition routes etc?

(ii) How the enterprises fared well in terms of profitability, employment and income? Have they achieved desired objectives?

(iii) What are the reasons for poor performance of enterprises?

(iv) What are the policy implications of micro enterprises development and what lessons can be drawn?

The study is mainly based on primary data which wascollectedfrom six states covering fourteen districts and over 11 thousand beneficiaries giving due representation to types of enterprises, skill and training profiles, investment and income across social groups and gender.

Economic Profile of Enterprises

This section examines various characteristics of enterprises such as type of ownership, functioning status and typology of enterprises, participation by different social groups, gender issues, skill and training profile, investment and income etc within overall framework of the scheme.

The Prime Minister's RozgarYojana (PMRY) was introduced in 1993. It is one of the important credit-linked subsidy schemes to generate self-employment opportunities for the educated youth by assisting them in setting up viable micro enterprises. During the initial year, this scheme was implemented in the urban areas only and from 1994-95 extended to the rural areas. The main objective of the PMRY is to provide financial and technical support to educated unemployed youth in setting up micro- enterprises in industry or business or service sector. This scheme is being implemented by the Ministry of Agro and Rural Industries, Government of India, through District Industries Centres (DIC). Loans are provided by the nationalised banks as per the guidance and directions by the Lead Bank in each district, coordinating with the respective DICs. The financial support is in the form of (i) composite loan at normal interest, and (ii) government subsidy, both within stipulated ceilings. It also provides for training of a short duration in entrepreneurship. Assistance under PMRY is open to persons between 18 and 35 years (with relaxation for scheduled caste (SC) scheduled tribe (ST) other backward class (OBC) and weaker sections of the society), who passed Class VIII, whose family income does not exceed Rs.40, 000 per annum and who are residents of the area for the past three years. The scheme also has a provision of 22.5 percentreservation for SC/ST and 27 percent for OBC and preference for women and weaker sections. By the end of 2005-06, it is estimated to have provided self-employment opportunities to 3.8 million persons.

To assess the effectiveness of the implementation of PMRY and its economic impact on beneficiaries, two Rounds of evaluation were earlier conducted during 1994-95 covering beneficiaries of the years 1993-94, 1994-95 and in 2000-01 covering those of 1995-96, 1996-97 and 1997-98. Ministry of Agro and Rural Industries, Government of India, has commissioned IAMR in 2004-05 for Third Round of PMRY evaluation, covering the beneficiaries of 1998-99, 1999-2000 and 2000-01. It covers 14 districts from six States i.e. Lower Subansiri (Arunachal Pradesh), Navsari, Jamnagar, Dahod (Gujarat), Udipi, Raichur, Kolar (Karnataka), East District (Sikkim), Bareilly, Mirzapur, Shravasti (Uttar Pradesh), Bankura, Siliguri, South 24 Pargana (West Bengal).The ownershipprofile of enterprises by different attributes has been discussed what in follows.

(i) Ownership of enterprises

In all 11,071 enterprises are covered in six states, of which an overwhelmingly large majority (95.5 percent) have sole ownership or proprietorship and fewer enterprises are under partnership basis (about 1 percent) and the status of remaining enterprises are not known (Table1). The ownership pattern does not vary across six states barring Gujarat state where 24 percent units did not divulge their ownership status. This clearly indicates preference of entrepreneurs for sole proprietorship than other forms of ownership.

Table 1: Ownership of the ventures

State	Total number of beneficiaries	Single owner	Partnerships	Not responded
Arunachal Pradesh	145	142	3	-
Gujarat	1,529	1,131	26	372
Karnataka	3,806	3,745	42	19
Sikkim	66	62	4	-
Uttar Pradesh	4,993	4,984	9	-
West Bengal	532	513	19	-
All India	**11,071**	**10,577**	**103**	**391**
	(100.0)	**(95.5)**	**(0.9)**	**(3.5)**

Source: IAMR (2006).

(ii) Start of establishment

About 48 percent units were started during 1998 to 2001 and for a substantive number of units (39 percent) information was not available, probably due to recall lapse or due to other reasons. After 2001 less than one percent units were set up. The trend across states does not vary as highest numbers of units were established during 1998-2001(Table2).

It has often been observed that there is high turnover of units in the unorganised or informal sector and within short period of time many units disappear and also new one reappear. Such volatility is often common feature of this sector. Why there has been huge increase in number of units during 1998 to 2001 and then steep down turn after 2001 in almost all the states except in Arunachal Pradesh? This probably needs to be examined whether there has been any change in policy stance during the period or reflect sampling error that could not capture the nuances of units.

(iii) Time taken to start activity

It has been often complained that average time taken to set up a unit is very high due to cumbersome procedural delays and corruption prevails that prevents for timely assistance from the government agencies. But this argument does not seem to be valid as majority of units (78 percent) start their activity within a period of 1 to 4 weeks (Table3). And only a fewer units (4-5 percent) take unduly longer time (13 weeks or more). There are no perceptible variations in this trend across states. This is positive indicator on the part of policy initiatives to promote micro enterprises with a view to provide sustainable livelihoods to educated youth.

Table 2:Year of start of units

Year of start	Arunachal Pradesh	Gujarat	Karnataka	Sikkim	Uttar Pradesh	West Bengal	All India
Prior to 998	6	82	282	9	791	87	1,257
1998 to 2001	42	876	2,117	51	1,933	378	5,397
After 2001	37	13	19	1	4	25	99
Not available	60	558	1,388	5	2,265	42	4,318
Total	**145**	**1,529**	**3,806**	**66**	**4,993**	**532**	**11,071**

Source: IAMR (2006).

Table 3: Distribution of beneficiaries by time taken to start activity

State	Total no. of beneficiaries	No. not responding	Percentage of respondents by time taken to start				
			1 to 4 weeks	5 to 8 weeks	9 to 12 weeks	13 weeks or more	All respondents
Arunachal Pradesh	145	79	51 (77.3)	8 (12.1)	3 (4.5)	4 (6.1)	66 (100.0)
Gujarat	1,529	585	828 (87.7)	96 (10.2)	7 (0.7)	13 (1.4)	944 (100.0)
Karnataka	3,806	1,257	2,012 (78.9)	425 (16.7)	77 (3.0)	35 (1.4)	2,549 (100.0)
Sikkim	66	26	32 (80.0)	6 (15.0)	- (-)	2 (5.0)	40 (100.0)
Uttar Pradesh	4,993	1,595	2,585 (76.1)	666 (19.6)	115 (3.4)	32 (0.9)	3,398 (100.0)
West Bengal	532	144	288 (74.2)	49 (12.6)	27 (7.0)	24 (6.2)	388 (100.0)
All States	**11,071**	**3,686**	**5,796 (78.5)**	**1,250 (16.9)**	**229 (3.1)**	**110 (1.5)**	**7,385 (100.0)**

Figures in brackets are row percentage

Source: IAMR (2006).

(iv) Functioning status and typology of units

It has been argued that many units spring up in the unorganised sector but soon they disappear primarily due to higher instability and few survive relatively longer period. This happens in this sector where access to government support is limited and often faces competition both in the product and labour markets from the organised segment.

The annexure table1 supports our argument that instability is one of the main features of the unorganised sector. Little over 62 percent units have been reported functional and about 38 percent units non-functional and the status of remaining units is not known. Service activities dominate (66 percent) followed by industry (62 percent) and business (61 percent) (See annexure1). Topology of functional units in terms of activity across states show marked variations. Arunachal Pradesh and Sikkim show 29 and 37 percent functional units respectively which is low compared to other states. A large number of units remain non-functional in these states is cause for serious concern.

The reasons for non-functional units are not due to lack of access to support system but lack of demand and tough competition in the product market that are reported widely in these states.

(v) Participation of women

Gender bias is not related only to work but also education, health and other productive resources and participation in economic activities (Awasthi, 1999). Majority of women are handicapped in number of wayslimited access to land and lack of mobility associated with family burden primarily due to women's subordination in patriarchal order. Such gender discrimination has been widely documented in the literature (Agarwal, 1994, 1997; Banerjee, 1995).

Gender bias is widespread in the government development programmes and participation of women in PMRY is relatively much lower (13 percent) than in other similar programmes such as Swarnjayanti Gram Swarozgar Yojana (SGSY) and Urban Self Employment Programme (USEP) (IAMR, 2006). Application received, recommended and sanctioned for PMRY schemehas remained abysmally low at 13-14 percent and overwhelming large majority of loan disbursement (87 percent) was made to male beneficiaries. It has also been noted that in urban area women participation has shown some encouraging results while in rural area the results are somewhat contrary and in turn widened the rural urban divide (Agrawal, 2007).

(vi) Functional units by social category

Not only gender dimension but social class dimension is so central in that influences the access and barrier to numerous non-farm activities. It has been also noted that the lower social class generally face additional constraints in the labour market in accessing non-farm employment, especially in high productivity activities, primarily because their low entitlement base compared to other social classes (Lanjouw and Shariff, 2002; Ramachandran, et al., 2002). Several field research results shows that the upper castes tend to dominate local politics and social dynamics and enjoy better asset endowments, more favourable access to education and information that helps them to access better, remunerative and productive non-farm employment opportunities. Types of economic activities pursued in turn influences the expenditure behaviour of households. It has been observed that in the case of SCs poverty ratio is higher both farm and non-farm sectors and activity wise as well (Thorat et al., 2005). However, the present research findings of PMRY study refute the above arguments. There does not appear to be marked difference across different social groups in terms of ownership of functional units. In fact OBC has the highest share than others social groups (Table4).

(vii) Skill training

A large proportion of beneficiaries have education up to matric (29 percent) and only 3.2 percent of the beneficiaries had a technical degree or ITI or any other technical diploma or certificate (IAMR, 2006). The responses show that most of the beneficiaries had not had any technical training and whatever trade

training they have acquired is mostly through informal routes. The main training providers are NGOs followed by the District Industries Centres (DIC), Bank etc. It has been observed that training is not only inadequate (7-20 days) but also less relevant to the area specific and activity chosen. The survey results have brought out clearly that content of training under PMRY requires substantial changes. Training has to be based on specific activity with more technical contents. Training must also cover aspects of financial management and marketing along with training in soft skills like communication, persuasion, etc.

(viii) Income class and functional units

Is there any relationship between the income groups and that of functioning of units? It is generally argued that the smaller entrepreneurs make use of their capital more efficiently and productively because capital is relatively scarce factor of production. It can be noted that in the lower income group the percentage of functional units is higher and the units of functional units decline as we move to higher ladder of income groups (Table5).

Table 4: Percentage of functioning units by social category

Social category	Percentage of functioning units
1. Scheduled Castes	57.8
2. Scheduled Tribes	63.1
3. OBCs	64.6
4. General	60.5
All	**62.2**

Source: IAMR (2006).

Table 5:Percentage of functioning units by initial family income

Initial family income class	Percentage of functioning units
1. No family income or not reported	56.3
2. Less than Rs. 10,000	71.2
3. Rs. 10,000 to 19,999	64.5
4. Rs. 20,000 to Rs. 29,999	62.8
5. Rs. 30,000 and above	61.6
All	**62.2**

Source: IAMR (2006).

(ix) Investment by activity

Average total investment turns out to be approximatelyRs. 78 thousand of which 82 percent is met out through loan and remaining 18 percent is covered through an additional investment (Table6). This pattern, by and large, remains the same barring two states (namely, West Bengal and Karnataka) where proportion of additional investment is higher than national average. Activity-wise investment also does not show any glaring variations across states barring two hill states (namely, Arunachal Pradesh and Sikkim) where investment in industry is higher than business and services while in other states services predominates.

Overall average investment ranged as low as Rs.59 thousand in Gujarat to highest Rs.0.114 million in Arunachal Pradesh. Loan amount pattern is also noted similar in these two states. The additional investment component was the highest in West Bengal at Rs. 22,537 and the lowest in Gujarat at Rs. 7,510. Overall investment variabilitymeasured by coefficient of variation (CV) does not evince marked variations. The variation in CV in total investment and loan is lowest indicating lowest instability while for additional investment that is met out from own source is higher indicating higher instability.

Surprisingly, Gujarat, one of the industrially developed states with high entrepreneurship, however, shows relatively low level of investment compared to other states while it has highest numbers of functional units. Is it a case of efficient utilisation of funds? Or just operating in low equilibrium trap is to be examined in later section.

Average per unit investment in functional units is reported to be highest in Arunachal Pradesh (Rs.0.134 million) and lowest in Karnataka (Rs.75 thousand). Surprisingly, one third of units have been reported non-functional and ratio of non-functional investment to functional investment works out to be 82 percent. This ratio varies from 70 percent in Sikkim to 93 percent Uttar Pradesh (Table7).

It is a matter of serious concerns from policy point of view that one-third units remain non-functional and huge amount of investment made in these units gets dissipated without any returns.When capital base and skill base is low it will have snowballing implications and the units are likely to be operating in a low productivity syndrome with low surplus that would eventually make the enterprise uneconomical and closure.

Table 6: Average total investment by activity

State	Activity*	No. of units	Average total investment		
			Loan	additional investment	Total investment
Arunachal Pradesh	Business	62	87,397	15,484	1,02,881
	Industry	31	1,05,921	10,194	1,16,115
	Service	52	1,14,224	13,500	1,27,224
	Not reported	-	-	-	-
	All activities	**145**	**1,00,978**	**13,641**	**1,14,619**
Gujarat	Business	469	53,294	6,914	60,207
	Industry	413	45,027	7,177	52,204
	Service	338	1,30,669	8,328	1,38,997
	Not reported	23	-	-	-
	All activities	**1,243**	**51,458**	**7,510**	**58,968**
Karnataka	Business	2,300	52,395	15,096	67,491
	Industry	256	64,823	22,502	87,325
	Service	1,145	58,813	15,476	74,290
	Not reported	105	55,870	14,826	70,696
	All activities	**3,806**	**55,254**	**15,706**	**70,960**
Sikkim	Business	48	49,045	10,833	59,878
	Industry	7	93,581	10,286	1,03,867
	Service	11	77,044	17,273	94,316
	Not reported	-	-	-	-
	All activities	**66**	**58,435**	**11,848**	**70,283**
Uttar Pradesh	Business	3,623	71,834	13,902	85,737
	Industry	699	77,459	11,945	89,404
	Service	644	77,282	11,543	88,825
	Not reported	7	71,957	18,143	90,100
	All activities	**4,993**	**73,346**	**13,320**	**86,667**
West Bengal	Business	301	63,963	24,748	88,731
	Industry	103	68,551	33,143	1,01,695
	Service	128	73,711	8,802	82,513
	Not reported	-	-	-	-
	All activities	**532**	**67,206**	**22,537**	**89,743**
All States	Business	6,803	63,617	14,297	77,913
	Industry	1,509	66,490	13,834	80,325
	Service	2,318	76,574	12,937	89,511
	Not reported	116	45,763	12,087	57,850
	All activities	**11,071**	**64,424**	**13,939**	**78,363**
C.V.			**0.25**	**0.32**	**0.22**

*Business activities include any activity that involves trading in commodity or goods, while industries cover manufacturing, assembling, repairing, etc. and service activities include personal services like running of a beauty parlour, business services like data processing, typing or photocopying, transport related services like travel agency, etc.

Source: IAMR (2006).

Profitability, employment and incomes of enterprises

Profit is one of the important parameters for judging efficiency of an enterprise that ultimately determines the growth of an enterprise, employment and incomes. Surplus is critical for reinvestment and making employment productive or efficient and therefore the employment question needs to be looked in to this perspective.

It is evident from the Table8 that overall profit as percent of investment turns out to be about one third, which is indeed very high. Karnataka and West Bengal reporting 38 percent profits, while other states recording from 8 percent in Arunachal Pradesh to 31 percent in Uttar Pradesh.

(i) Profitability of functioning units

Average annual profit per unit ranges between Rs. 10 thousand to Rs. 12 thousand for three states (namely, Arunachal Pradesh, Gujarat and Sikkim) and it ranges between Rs.28 thousand to Rs. 35 thousands per annum in another 3 states (Karnataka, Uttar Pradesh and West Bengal) with overall annual profits reported to be Rs. 26 thousand. Even if we assume that an enterprise is managed by one entrepreneur and that he works for 8 hours per day then the profit turns out to be too low and is lower (or no better) than average daily wage rates for unskilled workers.

Overall average annual profits for functioning units are reported to be about Rs. 26 thousand. Activity wise highest profit has been recorded in business (Rs. 27 thousand) followed by services (Rs.24 thousand) and industry (Rs. 22 thousand) (Table8).

Table 7: Average total investment by functional status

State	Functioning status	No. of units	Average total investment		
			Loan	additional investment	Total investment
Arunachal Pradesh	Functioning	40	1,06,851	26,800	1,33,651
	Not functioning	99	99,605	9,152	1,08,757
	Not reported	6	84,470	-	84,470
	All units	**145**	**1,00978**	**13,641**	**1,14,619**
Gujarat	Functioning	840	75,738	7,428	83,166
	Not functioning	263	56,518	7,281	63,799
	Not reported	140	54,487	8,431	62,918
	All units	**1,243**	**51,458**	**7,510**	**58,968**
Karnataka	Functioning	2,154	57,646	16,999	74,645
	Not functioning	1,034	52,546	12,130	64,675
	Not reported	618	51,424	17,726	68,650
	All units	**3,806**	**55,254**	**15,706**	**70,960**
Sikkim	Functioning	23	79,154	11,218	90,372
	Not functioning	39	50,173	12,667	62,840
	Not reported	4	19,850	7,500	27,350
	All units	**66**	**58,435**	**11,848**	**70,283**
Uttar Pradesh	Functioning	2,424	73,591	15,879	89,470
	Not functioning	1,938	73,498	9,911	83,409
	Not reported	631	71,941	13,966	85,907
	All units	**4,993**	**73,346**	**13,320**	**86,667**
West Bengal	Functioning	296	69,219	26,873	96,092
	Not functioning	134	65,703	18,103	83,806
	Not reported	102	63,373	15,812	79,184
	All units	**532**	**67,206**	**22,537**	**89,743**
All States	**All units**	**10,785**	**64,424**	**13,939**	**78,363**

Source: IAMR (2006).

Table 8: Profitability of functioning units by activity

State	Activity	No. of functioning units	Average investment per unit (Rs.)	Average annual profit per unit (Rs.)	Percent of profit to investment
Arunachal Pradesh	Business	18	1,21,890	13,090	10.7
	Industry	9	1,35,837	17,778	13.1
	Service	13	1,48,823	2,215	1.5
	All	**40**	**1,33,651**	**10,610**	**7.9**
Gujarat	Business	301	59,874	15,183	25.4
	Industry	308	48,410	2,519	5.2
	Service	231	63,970	16,910	26.4
	All	**840**	**56,797**	**11,015**	**19.4**
Karnataka	Business	1,293	71,849	28,027	39.0
	Industry	142	91,272	32,970	36.1
	Service	719	76,705	27,579	36.0
	All	**2,154**	**74,754**	**28,204**	**37.7**
Sikkim	Business	12	64,708	6,542	10.1
	Industry	5	1,09,640	2,400	2.2
	Service	6	1,25,642	32,667	26.0
	All	**23**	**90,372**	**12,457**	**13.8**
Uttar Pradesh	Business	1,781	89,024	28,235	31.7
	Industry	333	89,943	29,501	32.8
	Service	308	91,250	24,293	26.6
	All	**2,424**	**89,433**	**27,908**	**31.1**
West Bengal	Business	165	93,882	37,172	39.6
	Industry	57	1,16,024	54,772	47.2
	Service	73	84,215	18,304	21.7
	All	**295**	**95,762**	**35,908**	**37.5**
All States	Business	3,548	80,713	27,321	33.9
	Industry	852	77,492	21,725	28.0
	Service	1,338	79,184	24,521	30.6
	All	**5,776**	**79,880**	**25,776**	**32.3**

Source: IAMR (2006).

(ii) Profit reporting units

A large majority of units (64 percent) have been reported as loss making and only 36 percent units are reported as profit making considering all the units (Table-9). Intensity of loss making units is highest in Arunachal Pradesh (94 percent) followed by Sikkim (85 percent) Gujarat and Uttar Pradesh (69 percent). West Bengal and Karnataka are only two states, which are reporting lowest loss making units (50 to 53 percent, respectively). Considering only the functional units, the profit reporting units increases to 59 percent, particularly Arunachal Pradesh, Sikkim and Uttar Pradeshreport substantive increase in such units.

(iii) Investment and profits

Analysis of only functioning units provides some clearer picture with regard to investment and profitability of these enterprises that has been shown in Table 10.

Overall profit ratio to investment rises to nearly 48 percent, which is significantly higher. This ratio also goes up for all the states, Arunachal Pradesh (54 percent), Karnataka and West Bengal (49 percent), Uttar Pradesh recording (48 percent) and the lowest profit ratio is reported in Sikkim (36percent). Average annual profit per unit is highest in Arunachal Pradesh (Rs.53 thousand) followed by West Bengal (Rs. 50 thousand), Uttar Pradesh (Rs.48 thousand), Karnataka (Rs.41 thousand), Sikkim (Rs.32 thousand) and Gujarat (Rs. 27 thousand).

How one can interpret these profit ratios? Is high profit ratio necessarily meaning high profits even assuming that profits reported are factually correct?

Using the minimum threshold analogy that an entrepreneur works 30 days in a month and 8 hours per day, then it appears that a large number of entrepreneurs are earning equal to minimum wages or even slightly higher than the minimum wages prescribed for unskilled or semi-skilled workers. If the profits are converted in to daily incomes then profit turns out to lowest in Gujarat(Rs. 75) followed by Sikkim (Rs.89), Karnataka (Rs. 114), Utttar Pradesh (Rs. 133), West Bengal (Rs.139) and Arunachal Pradesh (Rs. 147). If we take in to account of opportunity wage for unpaid family helpers then probably this will dip down further.

Are the entrepreneurs not just operating in a precarious margin of subsistence? When surplus is low, their capacity to invest or re-invest would bound to be also low that would have cascading implications to the economics of the enterprise in terms of employment and profitability.

(iv) Employment generation

One of the important objectives of promoting micro enterprises is to create employment primarily because these enterprises are labour intensive and help produce goods and services that embody more labour than capital, which is scarce. Table11 shows that investment per unit employment comes to be around Rs. 46-47 thousand and on an average employment generated per unit turns out to be 1.95 with little variance across activities. Self-employment is predominant mode of employment followed by unpaid helper and casual workers. Investment per unit employment is lowest in Karnataka (Rs. 30 thousand) and highest in Gujarat (Rs. 66-67 thousands). Contrary to the volume of investment, average employment per unit does not show any correspondence to the investment per unit. Average employment per unit is the highest in West Bengal (2.6) and Karnataka (2.5) while the investment per unit employment is lowestinWest Bengal (Rs. 30,000) and Karnataka (Rs.40,000). Similarly, in Gujarat average employment per unit is lowest but investment per unit employment is highest. By and large inverse relation can be observed between investment and average employment and profit per unit (figure 3). It remains somewhat obscure to judge the quality of employment without relating to wage rates that are not available. One can tentatively draw conclusion that when the returns from enterprise is low, the wage share bound to be low. In all probability the floor wages are lower than the minimum wages.

(v) Impact on income levels

What has been the impact of micro enterprises on the income levels of beneficiaries? Has the income increased, if yes, then how much? This can be one of the indicators of evaluation of a

scheme and such impact assessment can become one of the policy guidelines for monitoring and corrective measures. Table-12 below indicates increment in income as a result of the scheme. Only 44 percent beneficiaries responded and a majority of them (66 percent) did not report information on income. Out of those reporting, almost 20 percent beneficiaries had increase of income in the range of Rs.1 to 10 thousand per annum and 37 percent in the range of Rs.10 to 25 thousand per annum. About 24 percent beneficiaries had increase in their income in the range of Rs. 25 to 50 thousand and only 7 percent beneficiaries are such who had gained their income above Rs. 50 thousand. And 13 percent beneficiaries had no increase in their income during the year. It is observed that 57 percent beneficiaries had increase in their income less than Rs. 25 thousand per annum and 13 percent beneficiaries had no increase in their income levels. Almost 57 percent beneficiaries are such whose incomes had increased below Rs. 25 thousand per annum and their per day income can be treated equivalent to wages of unskilled worker. A large majority of beneficiaries (70 percent) had either little or no increase in their incomes through this scheme.

Table 9: Proportion of profit-reporting units by activity and state

State	Activity	Total no. of units	Percentage of functioning units to all units	Percentage of profit-reporting units among functioning units	Percentage of profit-reporting units to all units
Arunachal Pradesh	Business	62	30.0	22.2	6.7
	Industry	31	30.0	22.2	6.7
	Service	52	26.5	15.4	4.1
	All	**145**	28.8	20.0	5.7
Gujarat	Business	560	75.4	54.8	41.3
	Industry	511	75.9	7.1	5.4
	Service	458	77.5	65.9	51.1
	NR*	23	17.4	100.0	17.4
	All	**1,529**	76.2	40.7	31.0
Karnataka	Business	2,300	65.8	69.3	45.6
	Industry	256	67.6	63.1	42.7
	Service	1,145	72.3	71.3	51.5
	NR	86	77.1	24.1	18.6
	All	**3,806**	67.5	68.9	46.5
Sikkim	Business	48	25.0	33.3	8.3
	Industry	7	71.4	20.0	14.3
	Service	11	54.5	66.7	36.4
	All	**66**	37.1	39.1	14.5
Uttar Pradesh	Business	3,623	56.7	59.0	33.5
	Industry	699	52.7	42.0	22.1
	Service	644	52.6	44.8	23.6
	NR	7	66.7	100.0	66.7
	All	**4,993**	55.6	54.9	30.5
West Bengal	Business	301	68.8	73.9	50.8
	Industry	103	60.9	71.9	43.8
	Service	128	62.4	68.5	42.7
	All	**532**	68.8	72.3	49.7
All States	Business	6,803	60.9	62.8	38.2
	Industry	1,509	62.4	34.5	21.5
	Service	2,338	66.4	63.6	42.2
	NR	116	25.0	38.9	7.8
	All	**11,071**	62.2	58.6	36.4

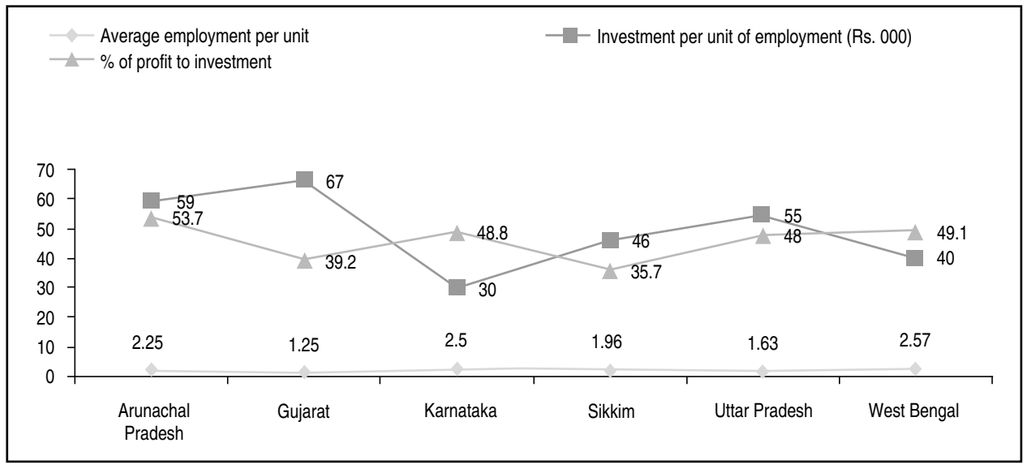
*Source: IAMR (2006).*NR = not reported*

Table 10 : Profitability of functioning units reporting profits by activity

State	Activity	No. of functioning units reporting profits	Average investment per unit (Rs.)	Average annual profit per unit (Rs.)	Percent of profit to investment
Arunachal Pradesh	Business	4	1,01,250	58,907	58.2
	Industry	2	90,500	80,000	88.4
	Service	2	1,02,000	14,400	14.1
	All	**8**	**98,750**	**53,054**	**53.7**
Gujarat	Business	165	69,126	27,697	40.1
	Industry	22	70,733	35,273	49.9
	Service	153	67,975	25,824	38.0
	Not classified	4	1,88,750	39,250	20.8
	All	**344**	**70,108**	**27,483**	**39.2**
Karnataka	Business	889	82,036	40,506	49.4
	Industry	89	99,973	52,321	52.3
	Service	506	81,922	38,726	47.3
	Not classified	7	88,571	30,286	34.2
	All	**1,491**	**83,099**	**40,559**	**48.8**
Sikkim	Business	4	56,250	19,625	34.9
	Industry	1	65,000	12,000	18.5
	Service	4	1,28,000	49,000	38.3
	All	**9**	**89,111**	**31,833**	**35.7**
Uttar Pradesh	Business	1,050	98,938	47,892	48.4
	Industry	140	1,04,323	47,957	46.0
	Service	138	94,372	44,195	46.8
	Not classified	2	1,02,250	66,000	64.5
	All	**1,330**	**99,036**	**47,542**	**48.0**
West Bengal	Business	122	98,268	50,195	51.1
	Industry	41	1,27,018	76,146	59.9
	Service	50	86,420	26,890	31.1
	Not classified	1	90,000	25,000	22.5
	All	**214**	**1,00,969**	**49,604**	**49.1**
All States	Business	2,234	89,901	43,556	48.4
	Industry	295	1,03,433	52,341	50.6
	Service	853	81,961	36,594	44.6
	All	**3,396**	**89,203**	**42,546**	**47.7**

Source: IAMR (2006).

Figure 3: Graph of per unit employment and investment and percent of profit to investment



Source: Tables 10 and 11.

Table 11 : Employment generated per functioning unit by activity

State	Activity	No. of functioning units	Average employment per unit				Investment per unit of employment (Rs.)
			Self	Wage	Unpaid helpers	Total	
Arunachal Pradesh	Business	18	1.00	0.28	0.22	1.50	81,260
	Industry	9	1.00	2.11	0.11	3.22	42,185
	Service	13	1.00	1.31	0.31	2.62	56,650
	All	**40**	**1.00**	**1.03**	**0.22**	**2.25**	**59,400**
Gujarat	Business	301	1.00	0.19	0.10	1.29	46,449
	Industry	308	1.00	0.08	0.18	1.26	38,527
	Service	231	1.00	0.06	0.13	1.19	1,34,280
	All	**840**	**1.00**	**0.08**	**0.17**	**1.25**	**66,532**
Karnataka	Business	1,293	1.00	0.41	1.00	2.41	29,833
	Industry	142	1.00	1.06	1.24	3.30	27,658
	Service	719	1.00	0.60	0.91	2.51	30,570
	All	**2,154**	**1.00**	**0.51**	**0.99**	**2.50**	**29,890**
Sikkim	Business	12	1.00	0.17	0.41	1.58	40,954
	Industry	5	1.00	1.00	0.80	2.80	39,147
	Service	6	1.00	0.33	0.67	2.00	62,821
	All	**23**	**1.00**	**0.39**	**0.57**	**1.96**	**46,108**
Uttar Pradesh	Business	1,781	1.00	0.32	0.23	1.55	57,488
	Industry	333	1.00	0.75	0.23	1.97	45,588
	Service	308	1.00	0.54	0.20	1.74	52,434
	All	**2,424**	**1.00**	**0.41**	**0.22**	**1.63**	**54,780**
West Bengal	Business	166	1.00	0.77	0.55	2.32	40,448
	Industry	57	1.00	2.68	0.79	4.47	25,804
	Service	73	1.00	0.49	0.18	1.67	51,160
	All	**296**	**1.00**	**1.07**	**0.50**	**2.57**	**40,125**
All States	Business	3,549	1.00	0.36	0.51	1.87	45,915
	Industry	852	1.00	0.70	0.42	2.12	38,692
	Service	1,338	1.00	0.49	0.57	2.06	55,057
	All	**5,766**	**1.00**	**0.44**	**0.51**	**1.95**	**46,559**

Source: IAMR (2006).

Table 12 : Distribution of beneficiaries by amount of increase in annual personal income

State	Additional annual income range Rs.						
	1-10,000	10,001-25,000	25,001-50,000	Above 50,000	No increase	Not reported	Total
Arunachal Pradesh	0	0	0	0	88	57	145
Gujarat	101	48	32	07	168	1,273	1,529
Karnataka	338	744	418	169	157	1,980	3,806
Sikkim	03	04	03	0	03	53	66
Uttar Pradesh	272	515	404	53	107	3,623	4,993
West Bengal	37	72	40	30	42	311	532
All States	**751**	**1,383**	**904**	**259**	**477**	**7,297**	**11,071**

Source: IAMR (2006).

It is clear from the preceding analysis that a large number of units are sick or non-functional (48 percent) and reporting huge losses and profits turning out to be only at minimum threshold levels, quality of employment and income appears to be precarious that evidently take one to conduct research enquiry that what are the probable reasons for not getting these enterprises off the ground. This we will take up in the next section.

Reasons for Poor Performance

There are numerous factors that results in poor performance of the enterprises either emanating from supply side or from demand side or such factors can operate from both the sides. Often, capital or access to capital is regarded one of the most critical factors for lack of enterprise development. The question arises that when capital is provided (in the form of loan and subsidy) by the development agency then why the enterprises continue to slog at lower end of subsistence margin. What are the factors that hinder enterprise development? We shall examine some of the issues through the evidence available from survey results.

We have seen in the preceding chapter that only 52 percent units are functional and remaining are either non-functional or including closed down units. This is one of the most distress observable facts that a huge amount of money is dead without any returns in such units.

(i) Intensity of closure units

It can be noted that 14 percent are reported closed of the total units and intensity of closure units is highest in Sikkim (44 percent) and lowest in Gujarat (9 percent) (Table13). When closure units are expressed in terms of non-functional units then proportion of closure units shoots up to 29 percent, highest being in Sikkim (67 percent) and lowest in Gujarat (19 percent).

Tough competition, sickness, domestic problems and inadequate finance are attributed the major reasons for closure of units. Tough competition in the product market is reported as one of the major reasons for closure of the units. It so happens that many units simply spring up without demand analysis that results in division of limited segment of market among many enterprises.

(ii) Reasons for closure

Some of the units could not be started off even after receiving loans. The major economic reasons surfaced are inadequate finance, lack of skills and lack of business management (Table14).

There have been instances of diversion of funds for which the loan was sanctioned and given to entrepreneurs for setting up enterprises. Such irregularity is more pronounced in business activity than others and Uttar Pradesh and Karnataka are observed to have been most notorious cases in diversion of funds (Table15). Diversion of funds is matter of serious concern and it indicates lack of monitoring mechanism and auditing in place.

Table 13 : Closedunits by reasons for closure

Reason for closure	Number of closed units						
	Arunachal Pradesh	Gujarat	Karnataka	Sikkim	Uttar Pradesh	West Bengal	All
1. Got regular wage employment	6	6	64	-	23	9	108
2. Tough competition	7	23	248	4	332	66	680
3. Lack of demand	12	24	113	4	194	41	388
4. Inadequate finance	5	-	166	10	237	42	460
5. Sickness	2	59	156	5	270	25	517
6. Domestic problems	1	23	157	3	371	25	580
7. Lack of skills	4	-	48	6	109	18	185
8. Other	29	57	113	11	142	67	419
Total no. of closed units	**40**	**132**	**441**	**29**	**764**	**115**	**1521**

Note: In many cases there were multiple reasons. Hence total of columns may not tally with the last row.

Source: IAMR (2006).

Table 14 : Reasons for not starting units after receiving loans

State	Lack of demand / orders	Shortage of raw material	Lack of skills	Lack of business mgt.	Inadequate finance	Domestic problems	Others
Arunachal Pradesh	0	0	0	0	0	0	0
Gujarat	0	0	5	1	3	3	0
Karnataka	1	0	0	0	2	0	2
Sikkim	0	0	0	0	0	0	0
Uttar Pradesh	10	9	24	26	21	25	22
West Bengal	1	0	0	0	2	3	4
All States	13	9	29	29	35	40	43

Source: IAMR (2006).

Table 15 : Number of cases of diversion of funds by activity

Activity	Number of cases of diversion of funds						
	Ar. Pr.	Gujarat	Karnataka	Sikkim	U.P.	West Bengal	All States
Business	1	1	58	3	224	3	280
Industry	1	1	12	-	32	-	46
Service	1	-	20	-	34	-	55
All	3	2	90	3	280	3	381

Source: IAMR (2006).

Table 16 : Regularity in repayment of loans

State	Number and percentage of beneficiaries		
	Regular	Not regular	No response
1. Arunachal Pradesh	4 (2.7)	105 (72.4)	36 (24.8)
2. Gujarat	881 (70.9)	193 (15.5)	169 (13.6)
3. Karnataka	1,466 (38.7)	1,568 (41.4)	772 (19.9)
4. Sikkim	12 (18.2)	48 (72.7)	6 (9.1)
5. Uttar Pradesh	1,982 (39.7)	1,586 (31.8)	1,425 (28.5)
6. West Bengal	173 (32.5)	327 (61.5)	32 (6.0)
All States (Average)	**4,518 (42.0)**	**3,827 (35.5)**	**2,421 (22.5)**

Source: IAMR (2006).

Table 17 : Reasons for delayed or non-repayment of loans

State	Number of beneficiaries by reasons for irregular or non-repayment						
	Unit not started	Closure	Losses	Diversion of funds	Inadequate income	Willful defaulter	Others
Arunachal Pradesh	21	40	17	3	25	2	2
Gujarat	12	132	34	2	224	10	84
Karnataka	49	441	379	90	537	99	73
Sikkim	-	29	5	3	14	1	1
Uttar Pradesh	103	764	204	280	396	73	148
West Bengal	8	115	54	3	182	47	9
All States	**193**	**1,521**	**693**	**381**	**1,378**	**232**	**317**

Note: Several beneficiaries gave multiple reasons. As such, the totals of rows exceed the number of beneficiaries making irregular payments.

Source: IAMR (2006).

Table 18 : Number of beneficiaries by type of assistance needed to revive closed units

State	Number of beneficiaries requiring for revival of closed units		
	Financial help	Access to markets	Type of assistance not specified
Arunachal Pradesh	6	4	14
Gujarat	1	0	0
Karnataka	37	17	12
Sikkim	3	2	0
Uttar Pradesh	58	18	11
West Bengal	30	14	08
All States	135	55	35

Source: IAMR (2006).

Diversion of funds is associated by irregularity of repayment of loans. Out of total respondents, almost 36 percent beneficiaries are not regular in repayment of loans and only 42 percent are repaying loans on regular basis. Intensity of irregularity of repayment of loans is in particular very high in Arunachal Pradesh, Sikkim and West Bengal (Table16). This makes enterprises not only low creditworthy but makes the scheme ineffective and inefficient.

Reasons for delayed or non-payment of loan stated by the respondents are presented in Table17 below. It can be observed that closure; inadequate incomes and losses are predominant factors responsible for non-repayment of loans. This pattern follows broadly in all the states with Uttar Pradesh reporting diversion of funds to a higher extent. Only 26 percent beneficiaries have repaid their full loan amount and 19 percent cases are such who have not repaid any loan. Also, percentage of disbursed loan repaid of functional units is as low as 6 percent in Arunachal Pradesh, 36 percent in West Bengal and 55 to 58 percent in Sikkim and Karnataka and 86 percent in Uttar Pradesh (IAMR, 2006).

(iii) Assistance needed for revival

There does not appear to have made any efforts either on the part of beneficiaries or DICs or even Banks to revive the closed units. Nor any efforts were made to mount any diagnostic study with a view to knowing possible reasons for closed units. Some indications are available from the PMRY Survey results showing that financial help and marketing are the critical factors needed for revival for these units. Only 66 beneficiaries out of the 441 closed units in Karnataka and 87 of the 764 in Uttar Pradesh, for instance, responded (Table18).

Evidences from the survey are only indicative and in no way exhaustive and therefore it is difficult to conclude precisely the reasons for mortality of units and revival strategy needed. It would require a detailed diagnostic study as why substantially large numbers of units are languishing and what really prevents government to formulate revival strategy. We examine some of these issues within the framework of economic logic and a policy perspective what in follows in the next section.

Strategy and Policy Implications

(i) What are the lessons from PMRY?

We have noted in earlier sections that experiences of PMRY are not very encouraging in terms of utilisation of capital, survival of units, product base, profitability, training and skills, employment and incomes.

Investment is not sufficient to make any dent on scale of production and often the ceiling amount of loan is predetermined. Whatever investment has been made available to the units that do not seem to be either efficiently utilised or being managed professionally. Even in advancing loan collateral are insisted upon by the banks (16 percent). Cases of diversion of funds are also reported. Mortality rate of units varied lowest between 9percent in Gujarat to highest 44 percent in Sikkim. Out of total respondents, almost 36 percent beneficiaries are not regular in repayment of loans and closure, inadequate incomes and losses are predominant factors responsible for non-repayment of loans.

Study indicated that very few were technically qualified or even informally trained. Duration of training is low and insufficient to internalise the skills imparted. Training did not include aspects like financial management and quality in production of goods and services and motivation for repayment of loans. A large majority of units (64 percent) have been reported as loss making and only 36 percent units are reported as profit making considering all the units. Profit turns out to be too low and is lower (or no better) than average daily wage rates for unskilled workers. Average employment generated per unit turns out to be 1.95 with little variance across activities. It remains somewhat obscure to judge the quality of employment without relating to wage rates that are not available. Out of those reporting, almost 57-58 percent beneficiaries had increase of income in the range of Rs. 10 thousand to 25 thousand per annum, which turns out to be equal or even below to the prescribed minimum wages per day for unskilled workers.

(ii) Strategy for promotion of enterprises

Enterprise development has numerous advantages in terms of promotion of employment and incomes generation, helps utilisation of the local resources, easing the pressure on scarce capital, stops distress form of out migration, brings about decentralised form of production of goods and services, promote equity and can have significant spin off for the local economy that may generate forward and backward linkages.

However, enterprise development has to be seen in a holistic perspective and to be dovetailed within the frame of local economy that might present opportunities (say, niche products), constraints in terms of natural and human resources. It is prerequisite that enterprises are properly identified and developed. This will require undertaking techno-economic survey that might indicate the possibilities of enterprises to be promoted on sustainable basis. For identification and promotion of enterprises, a variety of constraints and handicaps are generally encountered that primarily emanate from physical conditions, lack of infrastructure or even personal constraints. Some of the constraints (i.e. physical) are given while other constraints can be mitigated by entrepreneurs themselves and by promotional agencies and by government policy makers. Within constraints it provides specific guidelines as what ought to be the essential characteristics of viable products, process of product identification and complete business plan for prospective entrepreneurs. With appropriate policy interventions it is possible to develop enterprise-based activities that would provide higher income through processing and value addition and help develop upstream and downstream linkages necessary to generate internal momentum of growth (Papola et. al., 2005).

Constraints of enterprise development however need to be construed within the frame of demand and supply sides. Supply side interventions are provision of credit, technology, marketing, skill development etc and demand side factors typically are macro-economic environment, regulatory and institutional frameworks and government policies etc.

It has been observed that sometimes fixed capital is provided under the scheme but no provision is made for working capital and if capital is provided then no provision for skill training or marketing. This has been mostly observed that schemes launched by the government machinery emphasise few limited supply of inputs rather than providing all the support services in an integrated manner (Papola, 1998). However, in the present scheme such lacunae have been surmounted to a large extent yet it suffers from demand side constraints. Supply side interventions might be accessible yet demand of goods and services might be still declining or facing constraints. Then question arises how to enhance the productive capacity of micro-enterprises. It is important that in a competitive environment only those enterprises should be promoted which have potential for growth or having high market demand.

It has been observed that micro enterprise have to face competition both in the product and labour markets from the formal sector enterprises, particularly from the larger units who have advantage of economies of scale. It would therefore unwise to promote all sorts of enterprises, which cannot survive for long. It has been noted that enterprises having linkages

with formal sector enterprises (viz, suppliers or service providers) have better prospects for growth. There are micro enterprises, which are well integrated with large units in the formal sector by way of subcontracting or putting out of certain activities that are produced solely by micro enterprises. These units always perform better and have higher chances for survival. It is important from the policy point of view to promote such enterprises. Most of the micro-enterprises use non-modern, second hand and domestically produced machineries (Mamgain and Awasthi, 2001). Such technology generates little or no surplus for reinvestment that in turn makes enterprises to operate in a limited resource base. When technology is non modern the product diversification will be narrow range and without improved products or product mix the demand for such goods and services are bound to be limited for wider markets. And such goods and services produced are likely to be for final consumption rather than as an input for large industries. Also, skill level is low and skills are mostly acquired through informal routes and such training does not face the problem of relevance in the context of a competitive environment. But then issue is whether such skill formation processes is necessarily productive. It is often observed that such training is appropriate to low productivity enterprises. Obviously, when technology used is non-modern, skill level is low and products are within narrow horizon for meeting the final consumption and this will lead obviously to low labour productivity. This all makes low initial endowments base for growth of these enterprises.

Here the case of Chinese Township and Village Enterprises (TVEs) provides some useful lessons. Liberalisation policies have provided dynamism to small and micro enterprises and these enterprises have grown remarkably over the years in terms of value addition, total factor productivity, exports and creating employment. Notwithstanding certain problems, small enterprises are the most vibrant element in the national economy and helped transformed the rural Chinese economy (Wang andYao, 2001; Kabra, 2005). We have clearly to learn the lessons that why small enterprises elsewhere have made remarkable progress and also to unlearn the lessons from within own country that why enterprises have not taken off the ground despite of meticulously designed programme.

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Annexure-1

Annexure Table 1: Distribution of units by activity and functioning status

State	Activity	Number of units			
		Functioning units	Non-functioning units	Status not available	All units
Arunachal Pradesh	Business	18 (30.0)	42 (70.0)	2	62
	Industry	9 (30.0)	21 (70.0)	1	31
	Service	13 (26.5)	36 (73.5)	3	52
	Not reported	-	-	-	-
	Total	**40 (28.8)**	**99 (71.2)**	**6**	**145**
Gujarat	Business	301 (75.4)	98 (24.6)	161	560
	Industry	308 (75.9)	98 (24.1)	105	511
	Service	231 (77.5)	67 (22.5)	160	458
	Not reported	-	-	23	23
	Total	**840 (76.2)**	**263 (23.8)**	**426**	**1,529**
Karnataka	Business	1,271 (65.8)	661 (34.2)	368	2,300
	Industry	140 (67.6)	67 (32.4)	49	256
	Service	707 (72.3)	271 (27.7)	167	1,145
	Not reported	27 (77.1)	35 (22.9)	24	86
	Total	**2,154 (67.5)**	**1,034 (33.5)**	**618**	**3,806**
Sikkim	Business	12 (25.0)	32 (75.0)	4	48
	Industry	5 (71.4)	2 (26.6)	-	7
	Service	6 (54.5)	5 (45.5)	-	11
	Not reported	-	-	-	-
	Total	**23 (37.1)**	**39 (62.9)**	**4**	**66**

State	Activity	Number of units			
		Functioning units	Non-functioning units	Status not available	All units
Uttar Pradesh	Business	1,781 (56.7)	1,361 (43.3)	481	3,623
	Industry	333 (52.7)	299 (47.3)	67	699
	Service	308 (52.6)	277 (47.4)	79	644
	Not reported	2 (66.7)	1 (33.3)	4	7
	Total	**2,424 (55.6)**	**1,938 (44.4)**	**631**	**4,993**
West Bengal	Business	165 (65.2)	88 (34.8)	48	301
	Industry	57 (68.7)	26 (31.3)	20	103
	Service	73 (78.5)	20 (21.5)	35	128
	Not reported	-	-	-	-
	Total	**295 (68.8)**	**134 (21.2)**	**103**	**532**
All States	Business	3,548 (60.9)	2,282 (39.1)	973	6,803
	Industry	852 (62.4)	513 (37.6)	144	1,509
	Service	1,338 (66.4)	676 (33.6)	324	2,338
	Not reported	29	36	51	116
	Total	**5,776 (62.2)**	**3,517 (37.8)**	**1,839**	**11,071**

*Figures in brackets are percentages to the total of cols. 3 and 4.

Source: IAMR (2006).

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Role of the Banking sector for SMEs financing in Bangladesh: An Analysis

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Bangladesh is transiting from low income group to an upper middle income group country, for which contribution from the small and medium business sectors is required. This is due to the fact that Small and Medium Enterprises (SMEs) can create employment generation; reduce income inequality and purchasing power capability. Though SMEs work in the formal sector but it also work in the shadow economy as a complementary. As such research question is to evaluate whether role of the banking sector to SMEs finance in Bangladesh is playing due diligence? The study considers both primary and secondary source of data. From the logit regression model we observed that SME loan has positive impact on creation of employment opportunity. Further, the study will analyze internal and secondary data to evaluate the current scenario of SMEs financing in Bangladesh. Policy makers of the country ought to keep supporting SMEs through enhanced institutional support, infrastructural support, ease of rules and regulations for application procedure of SMEs.SME finance in the green business and environmental friendly industry, creation of more women entrepreneurs, corruption free banking system, corporate governance and favorable guidelines and policies regarding SMEs funding and expansion of businesses at domestic and global arena will assist Bangladesh in achieving the required status for which bank should take holistic approach for SMEs financing.

Keywords: Formal and informal sectors, Shadow economy, Entrepreneurship, Bangladesh Bank

Introduction

Bangladesh became sovereign country in the year 1971after a strong battle against Pakistanis. After forty four years of sovereign country Bangladesh became lower middle income country as recognized by World Bank. When Bangladesh became independent, private enterprises were confined to only two percent of the total population. It was irony that the at that time non-Bangles especially West Pakistans largely controlled industries-banks-insurances etc. Bangladesh was called as Second colonial era from 1947 to 1971 by Faaland and Parkinson (2003).To achieve low income group of middle income country, most important part of contribution is small and medium businesses. This is due to the fact that SMEs can create employment generation. Currently banking sector of Bangladesh is trying to work as a connecting hub on SME financing as a profitable industrial sector. Susman (2007) argued that small and medium-size enterprises are trying to raise economic productivity and benefits through changing in traditional role as well as increasing competitiveness in the global economic process.

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Bangladesh has a magnificent model of entrepreneurial activities especially in the area of small and medium businesses from the ancient time period to till seventeenth century. At that time it had small and cottage industries, shipping industries, textile industry especially Moslin Shari, gold and silver smithy, milk products, making of combs and buttons from animal bones, treatment of raw hides, papermaking, sugar, salt industries etc. The then Bengal was augmented with shipped of commodities among different parts of the world. After seventeen century this entrepreneurial activities turned to become darkness of shadow. Domestic people of the country inclined to work as entrepreneurial activities due to political and historical reason. Unequal exchange worked at that time. As a result, in this geographical location, entrepreneurship developed by the domestic people was almost destroyed.

However, after independence of the country, small and medium enterprises are gradually working with more zeal, creativity, innovativeness, and dynamic characteristics, which contribute both the rural and urban areas of the country to accelerate the economic growth rate. Governor of Bangladesh Bank Rahman (2015) commented that Micro, small and medium enterprises (MSME's) contribution to GDP is 30 percent. 90 percent of private sector enterprises are MSMEs, employing 25 percent of the total labor force covering 80 percent of industrial

jobs and hence, reducing rural-urban gap with faster poverty reduction. Virtually, Small and Medium Enterprises (SMEs)are generating employment opportunities and contributing in the economic benefits of the country. Banking sector of the country is now trying to expedite the process of SMEs. SMEs can help both formal sector and informal sector of the economy as they can act complementarily. Bangladesh Bank is now giving importance on financial inclusion which has positive impact on the formal economy of the country. However, shadow economy is still playing vital role in the economy.

Watson (2010) commented that variety of SMEs definition of success and failure creates confusion. He opined that actually SMEs varies from country to country a regulated by each countries rules, regulations, financial institutions approaches, social attitude, and breadth of the economy etc. Definitely definition of SMEs of Bangladesh and UK won't be the same. Successes of SMEs are largely related to failure provided cost of failing is bounded (Watson, 2010).However, banking sector of Bangladesh as a whole is trying to finance SMEs for expansion of employment generation .Environment friendly SMEs are being required for which green financing by the banking sector in practice should rise.

Table:1: Different criteria of Small Enterprises

Serial No.	Sector	Fixed Asset other than Land and Building (Tk.)	Employed Manpower (not above)
01.	Service	50,000-50,00,000	25
02.	Business	50,000-50,00,000	25
03.	Industrial	50,000-1,50,00,000	50

(website: bb.org,bd , 2011)

From Table:1 we observe that both service and business sector employed member will be maximum 25 while for Industrial sector it will be 50.

Table : 2 : Different criteria of Medium Enterprises

Serial No.	Sector	Fixed Asset other than Land and Building (Tk.)	Employed Manpower (not above)
01.	Service	50,00,000-10,00,00,000	50
02.	Business	50,00,000-10,00,00,000	50
03.	Industrial	1,50,00,000-20,00,00,000	150

(Source: ibid)

From Table : 2 we observe that both service and business sector employed member will be maximum 50 while for Industrial sector it will be 150.

International Finance Corporation (2010) described that if very few SMEs have a positive awareness of a bank, capturing large segments of the market may be more of a challenge. More broadly, each of the activities of the competitor landscape evaluation will deepen a bank's competitive and client intelligence, and enhance its ability to position itself strategically and develop a tailored customer experience for the SME client.

In World Bank (2012) argued that SMEs play a key role in economic developmentand make an important contribution to employment. Financial access is critical for SME growth and development, and the availability of external finance is positively associated with productivity and growth. However World Bank (2012) also argued that more work is needed to evaluate the wide variety of SME finance policies, and international organizations are well suited to fill in these knowledge gaps.

SMEs are contributing in the economic development of the country. However, there is a general belief that SMEs help poverty reduction and create ability to purchasing power. SMEs mostly run under private sector. Lion shares of the owners of SMEs are private entrepreneur. Women at the grass root level are being capable to do non-farm activities, getting benefits and have the ability to raise purchasing power. Proper SMEs financing will help to achieve women empowerment. As such the study intends that whether borrowers' are satisfied with SMEs. However, the study will try to cover both male and female borrowers to assess whether SMEs financing through the banking sector is actually helpful for them or not?

Asian Development Bank (2014) urged that increasing bank efficiency is a common shared problem in Asian and OECD countries, although the problem is more acute in Asia. Nevertheless, both areas present the challenge of improving the instruments and enhancing the supply of bank options for SMEs.

Since SMEs financing is gradually becoming important through the banking sector, the study intends to know therole banking sector is playing for SMEs loan. As a resultant factor, research question of the study intends to see whether SMEs financing through the banking sector is helpful to expedite the economic process of the country or not?

Literature Review

The study has done following literature review to assess whether any justification for new study in the intended research area:

Sardar(1999) found that all government agencies are overly bureaucratic in their functioning unlike private support agencies. He suggests that some sort of institutional networking, which is absent, is required to ensure effective support to the SME sector in the context of Bangladesh. Khan(2000) argued that in Bangladesh lack of political commitments and absence of creation of healthy environment required for entrepreneurial growth are the limiting factors in the process of adequate supply of reasonable number of entrepreneurs. Hisrich and Peter(2002) argued that each entrepreneur needs to establish both a moral and a professional support network. These contacts provide confidence, support, advice and information. Ali(2003) mentioned that price should be fixed on the basis of analyzing the international market properly. Costing, promotional campaign should get wider recognition. When international contract is made at that time information regarding legal, ethical, and socio-cultural background of the investing country also may be collected.Hoque (2004) observed that as a development bank, the Bangladesh Shilpa Bank delivered industrial credit was not accompanied by adequate and efficient entrepreneurial guidance, supervision and direction. Jahur and Azad(2004) mentioned that in Bangladesh, small business enterprises are believed to have employed 87% of the total working forces and to produce large number of goods and services.

According to Khan and Hyder (2006) small enterprises are the lifeblood of any economy and are at the forefront of Government efforts to promote entrepreneurial activities, innovation and increased productivity. Khanka(2006) argued that creation of infrastructural facilities involves huge funds which the small entrepreneurs do lack. Moazzem(2006) argued that Government has to adequately distribute its resources through different budgetary measures in different sectors, preferably on SME-related and employment-enhancing activities. Considering the extent of importance of various sectors, priority is usually given to some important sectors, such as RMG, agriculture, livestock, agro-based industries, textiles, and jute industry etc. Susman(2007) described that the continuing worldwide trend to eliminate trade barriers and expand global trade presents SMEs in developed countries with an opportunity. Ganbold (2008) described that in developing countries, many of the innovations were originated in serving clients at the lower end of the private sector spectrum using microfinance technologies. These innovations consisted of providing small, uncollateralized working capital loans; promising access to larger amounts for longer terms based on repayment performance; and permitting small savings accounts that were safe, convenient, and flexible in terms of withdrawal. The key characteristic cutting across developing country commercial banks applying microfinance principles to SME finance is that they have focused on relationship-intensive banking rather than more traditional transactions banking.

Musonera(2008) commented that cheap labor in Rwanda is an opportunity but this can exploit as there is a tendency of shifting manual operations ,which requires less skills by the developed / developing countries to the poorer countries. Negrusa and Ionescu(2009) argued that Romanian SMEs need help for improving their knowledge of foreign markets, in attracting funds and also in improving their competitiveness to face to strong and global competition. Despite of limited resources, lack of production and Marketing capabilities many entrepreneurs are interested to expand their involvement in international operations.

Islam, Yousuf and Rahman (2014) described that conventional banks provided most of the SME loans to the entrepreneur. But in recent time Islamic banks are investing in SME sectors to develop the economy in halal way. SME investment is mainly concentrated in Dhaka division, but outside Dhaka there are many potential areas where raw materials for Small and Medium Enterprise are easily available to set up SME organization. Harif et al.(2010) observed that in Malaysia the range of financial management tools used by SMEs in Malaysia is still low. Many of the SMEs still use only predictable and often used components such as financial accounting and working capital management. Out of the six components of financial management, only the financial planning and control, financial accounting, and working capital management tools were being practiced by a high percentage of the SMEs in the study. Yannopoulos(2010) found that in a number of managers of small and medium sized Canadian firms revealed the degree of usefulness which was found that not all support services are equally useful or used to the same degree by Canadian exporters as some of these services are found more and others are less useful to the firms that participated in the study. Yahya et al.(2011) observed in Malaysia the characteristics of more innovative SMEs manufacturing firms are perceived to be different as compared to the less innovative SMEs manufacturing firms.

Nowduri (2012) described that more or less all SMEs are regional specific. In general, they design, develop and serve according to the local community needs and demands. Attitudes to sustainable SMEs development are varying significantly from region to region. At the same time, one cannot conclude that opportunities are not available for some SMEs. This is because the local priorities and pressures play an important role in the particular benefits being experienced in those regions. Looi (2014) argued that international entrepreneurship is not necessarily driven by both desirability and feasibility. The path coefficients from control belief strength to export intention between Malay and Chinese SMEs are significantly different, thus in the research framework this path is not generalizable across the two ethnic groups. Overall, Malay SMEs reported significantly higher level of motivations and export intention than their Chinese peers.

Uddin (2014) described that small and medium enterprises are recognized as a 'thrust sector' by the Ministry of Industries because of the contribution of this sector in the social advancement and economic growth. Though it is highly labor intensive but still major portion of job opportunity is generated by this sector. For the balance development of all over the country it plays a vital role. As a result the standard of living in country areas is increased.

Qamruzzaman(2015) observed that SMEs have noteworthy contribution to GDP , employment generation, poverty alleviation and women empowerment. He also opined that performance of SMEs did not fulfill the expectation of the country may be due to merely lack of access to institutional financing, lack of consumer base market for SMEs products and non-availability of formal SMEs entrepreneur development .

From aforementioned analysis, we observe that there is a gap between the role of the banking sector of the SMEs financing and borrower's perception about the fund. As such we have undertaken the study.

Objectives of the study

The study has been undertaken with the following objectives:

i) To assess the present role of the banking sector for SMEs financing in Bangladesh;

ii) To evaluate borrowers' satisfaction on the SMEs loan system of Bangladesh;

iii) To provide some recommendations on the basis of findings of the study.

Methodology of the Study

The research is based on both primary source and secondary sources. For primary sources, a questionnaire has been prepared. Total number of distributed questionnaires is 400 out of which 308 were recieved from the borrowers of the SMEs loan from various commercial banks of the country. Random sampling technique was used to select respondents. These respondents have been selected from following districts of the country: Tangail, Jessore, Sylhet, Rangpur, Patuakhali, Rangamati, Begarhat and Gazipur .

In the questionnaire there are three parts: i) Demography of the borrowers'; ii) Four questions based on the binary system i.e. yes or no; iii) Eleven questions measured in the likert scale.

For four questions Logit model has been used to assess whether success of SMEs loans prevails or not. Logit model is a regression model where the dependent variable is definite and we consider the Independent variables results as binary. The study has considered dependent variable as SME loan has positive impact (SMEL).

The following hypotheses are proposed:

Ho: SME Loan has positive impact on what?

Ha: SME loan has negative impact on what?

The study will examine following logit model:

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SMEL=f(PSLC,IRR,SMESE)

Where SMEL= SME loan has positive impact on the economy.

PSLC= Procedure of sanctioning loan is cumbersome

IRR= Interest rate is reasonable

SMESE= SME loan helps to achieve self-employment

A priori relationship of the aforesaid model is that cumbersome loan procedure (PSLC) will have negative effect, reasonable interest rate (IRR) should exert positive effects, and creation of self-employment opportunity (SMESE) will have a positive effect on success of SME loans (SMEL).

We have also taken published data from the secondary sources. Moreover, from internal sources we have collected data from SME and Special Programs Dept., Bangladesh Bank. Time period of the study is from 15th November, 2014 to31March, 2015.

Present Status

SMEs are growing impetus in Bangladesh as banks here are trying to emphasise on financial inclusion. Banking loan is required not only for doing business but helps to get logistic services. Bangladesh Bank has identified total numbers are 132 sectors as SMEs main sectors.).Asian Development Bank (2014) described that SME access to banks has gradually improved because of the various government support measures such as credit guarantees and mandatory lending in Asia and the Pacific. Among participating ASM countries, the lending scale to SMEs is relatively large (double-digit ratio to GDP) in the Republic of Korea (38.9%, 2012), Thailand (33.7%, second quarter of 2013), and Malaysia (20.1%, 2012). Bank lending to SMEs is still small (single-digit ratio to GDP) in Cambodia (7.8%, third quarter of 2013), Bangladesh (6.7%,2012), Indonesia (6.4%, 2012), and Kazakhstan (4.7%, 2012).From aforesaid study we observe that Bangladesh needs to push SMEs through the banking channel so that lending scale to SMEs in Bangladesh can be double digit ratio to GDP rather than 6.7% in the year 2012.

From Table :3,it is observed that while in the year 2009-10 ,contribution of Small and cottage industry is 8.17% while in the year 2013-14 (Provisionally) it is 6.60%. But small and cottage industry has relatively labour intensive and generates employment opportunities specially poorer section of the society. On the other hand for 2009-10, medium and large industry has 6.27% which is estimated to become 9.16% in the year 2013-14 (provisionally). Ratio of medium and large industry in terms of small and cottage industry in the year 2009-10 is 3.97 while it is estimated as 4.52 in the year 2013-14(provisionally).

Bangladesh Arthanaitic Samikhya, 2014(p.109) described that, in the bank and non-bank financial institutions, up to December 2013 at total number of 6,42,674 organizations total 177,020,05 crore taka was disbursed as SME loan. On the other hand in favor of women Entrepreneur against total number of 89,874 organizations total 6,078.03 crore taka was disbursed.

Unnayan Onesha (2013) argued that although disbursement of total SME Loan given by state owned commercial banks, foreign banks, and non-bank financial institution, except the specialized banks sector, increased to Tk. 473242.7 crore at the end of September, 2013 from Tk. 466162.3 crore at the end of June 2013, SME loan as a percentage of total loans has been increasing at an insignificant amount. Even though the total SME loan decreased by Tk. 9451.91 crore at the end of September 2013 from Tk. 24398.34 crore at the end of September 2012, the rate of growth of SME loan was negative at 5.25 percent in March, 2013. Especially, state owned banks observed a negative growth of 38.47 percent

Below in Table: 3, Size and Growth rate of GDP at manufacturing sector in Bangladesh.

Table : 3 Size and growth rate of GDP at Manufacturing sector in Bangladesh

(in Crore Taka)

Industry	2009-10	20010-11	2011-12	2012-13	2013-14 (provisional)
Small and Cottage industry	20039.0 (8.17)	21176.0 (5.67)	22569.1 (6.58)	24557.9 (8.81)	26179.4 (6.60)
Medium and large industry	79631.4 (6.26)	88475.3 (11.11)	97998.3 (10.76)	`108436.2 10.65)	118364.0 (9.16)
Ratio of Medium and large industry in terms of Small and Cottage industry	3.97	4.18	4.34	4.42	4.52

(Bangladesh Arthanaitic Samikhya ,2014, p.108)

Note: Ratio(Fourth Row) is calculated by the author

at the end of September 2013 compared to September 2012. According to the historical track record, total loans and SME loans might increase to Tk. 480342.4 crore and Tk. 110319 crore in December 2013, from Tk. 473242.7crore and Tk. 108599.5 crore in November2013, respectively. Lower disbursement of credit as well as lower recovery in agricultural, industrial, and SME sector not only impact in the present time and increase the default loan but also might impact on the medium term in the economy results in contracts the economy.

Below we have given summary of SMEs loan disbursement from 2010 to 2015(Jan-March) in Table:4.

Table:4 Summary of SMEs loan disbursement from 2010 to 2015(Jan-March)

(Crore Taka)

Description	2010	2011	2012	2013	2014	2015 (Jan-March)	Total (2010-2015)
Target to Distribute Loan (Tk.) Total Credit	38,858.12	56940.13	59012.78	74186.87	89030.95	104586.49	422615.34
Disbursement(Tk.) (Bank and Financial Institutions)	53,543.93	53719.44	69753.42	85323.25	100910.15	26140.08	389390.27
Target in terms ofDistribution(%)	137.79%	94.34%	118.20%	115.01%	113.34%	24.99%	--
Distribution in the service sector	3355.68	3530.85	3630.90	4602.89	7896.77	2989.80	26006.89
Distribution in the businesssector (Tk.)	35040.53	34382.64	44225.19	56703.72	62767.18	16394.61	249513.87
Distribution in the industrialsector(Tk.)	15147.72	15805.95	21897.33	24016.64	30246.20	6755.67	113869.51
Disbursements in terms of total disbursements(Tk.)							
Service	6.27%	6.57%	5.21%	5.39%	7.83%	11.44%	
Business	65.44%	64.00%	63.40%	66.46%	62.20%	62.72%	
Industry	28.29%	29.42%	31.39%	28.15%	29.97%	25.84%	
Distribution only through Commercialbanks (Tk.)	51,847.14	52073.50	68262.46	83437.21	98032.95	25319.73	378972.99
Distribution only through Financial institutions (Tk.)	1696.79	1645.94	1490.96	1886.04	2877.20	820.35	10417.28
Total Number of organizations received loans	308236	319341	462513	746610	541656	210800	2589156
Service organizations	16033	11964	14722	25758	39181	8450	116108
Business Organizations	228969	243895	290035	630109	440456	113845	1947309
Industrial Organizations	63234	63482	157756	90743	62019	88505	525739
Loan amount Distributed to women entrepreneur(Tk.)	1804.98	2048.45	2224.01	3351.17	3938.75	886.73	14254.09
Service organizations(Tk.)	171,22	198.52	230.21	313.63	489.77	122.58	1525.93
Business Organizations(Tk.)	1258.13	1160.04	1352.27	2061.66	2132.11	357.22	8321.43
Industrial Organizations(Tk.)	1258.13	689.89	641.53	975.88	1316.87	406.92	5289.22
No. of Organizations of Women Entrepreneur	13233	16697	17362	41719	42730	80370	212111
Loan amount disbursed in small organization(Tk.)	23034.89	25856.11	37828.46	44312.32	52584.55	10716.96	194333.29
Disbursement of loan amount in Rural area(Tk.)	---	14390.15	16617.16	19817.41	25412.88	2598.10	78835.70
Loan disbursed among New Entrepreneurs(tk.)	---	----	4835.52	13334.70	17690.30	4687.30	40547.82
Service Organizations(Tk.)	----	----	257.40	1022.74	1426.47	477.22	3183.83

Business Organizations(Tk.)	----	----	3685.23	9850.88	12276.48	3284.97	29097.56
Industrial Organizations(Tk.)	----	-----	892.89	2461.08	3987.35	925.11	8266.43
Loan disbursed amount among new women entrepreneurs(Tk.)	---	----	182.72	395.59	824.04	143.07	1545.42
Number of New Entrepreneurs organizations	---	----	26687	65802	84270	31674	208433
No. of Service organizations	---	---	1277	4181	5598	1718	12774
No. of Business Organizations	---	---	23009	54503	70213	27580	175305
No. of Industrial Organizations	----	---	2401	7118	8459	2376	20354
Number of New Women Entrepreneurs organizations	----	---	1273	3322	3673	1782	10050
Cumulative Balance of total loan and advances(Tk.)	329950.31	390728.10	451096.74	485884.57	554635.26	563100	---
Cumulative Balance of SME loan (Tk.)	69526.58	81099.20	100813.20	115884.87	136148.50	132405.63	---
Amount of Recovery(Tk.)	--	34276.20	45452.78	41935.90	69172.31	25607.12	216444.31
Rate of Recovery(%)	---	71.88	84.49	77.37	73.44	61.46	--
Classified loan in SME sector(%)	--	3.61	6.83	7.90	13.09	12.66	--

(Source: SME and Special Programs Dept., Bangladesh Bank)

In Table:4, we have shown a brief description of SMEs loan disbursement, creation of new entrepreneurs including of women entrepreneurs and recovery rate etc. From the table:4,it is observed that both banking sector and other financial institutions both are trying to encourage financing of SMEs .It is interesting to point out that in case of providing SMEs loan ,amount of loan is being provided is higher than target amount. Highest sector of loan is disbursed in business sector which is 62.72% in 2015(Jan.-March) where as in the industrial sector it is 25.84% and in the service sector it is 11.44% during the same time period. During the period of 2010 to 2015(Jan. to March) amount of loan disbursed to new women entrepreneur is BDT 1545.42 crore. Total number of new Entrepreneurs of SMEs is208433 out of which number of new women entrepreneurs are 10050 i.e. only 4.82% new women entrepreneurs in terms of total number of new entrepreneurs were created. Distribution only through Commercial banks during the entire period is (Tk.) 378972.99 while distribution through financial institutions is much lower as (Tk.) 10417.28 only.

Classified loan of SMEs sector in the year 2014 is 13.09% while in the year 2015(Jan.-March) is 12.66%.Rate of classification loan should be decreased for which proper monitoring and supervision and efficient banking is required.

However, Bangladesh economy is still growing. As such proper SMEs financed by the banking sector may be helpful to reduce poverty, creating employment generation and fulfillment of basic needs along with GDP growth rate. More emphasis should be given on industrial loan under SMEs rather than business sector. In case of financing SMEs projects banks should be cautious about green business and environmental friendly industry. Furthermore, products of SMEs may be exported to abroad for which strategic alliance with international companies are required. Techno entrepreneurs should get SMEs financing. In this case banks may have special wings so that those who want to export, they can get special advise from the how to export their products at abroad. On the other hand to mitigate the domestic need, import substitution industrialization should be set up under SMEs. There should be vertical and horizontal coordination between import substitution industrialization and Export led growth strategy. This is vital to achieve upper middle income economy of Bangladesh.

Empirical Results

Below we have summarized demographics of the SMEs borrow from the banking sector who respond the questionnaire in Table:5 :

From aforesaid Table:5 , we observed that out of 308 respondents ,male borrowers are 67.21percent while female borrowers are 32.79 percent. In case of level of education highest ranking falls within the range of above SSC to HSC which is 32.79 percent. Second highest is above HSC to Bachelor degree is 31.49 %.In case of the age of the respondents, highest number of response we get for the criteria of the age in between 29 and 39 years i.e.36.37 percent. In case of experiences more than 8 years up to 11 years, respondents are 47.08 percent. 39.94 percent thinks that social prestige rises due to SMEs business while 60.06 per cent does not think so. In case of net income received per month we observed that in between Taka 20,001 and 24,000 respondents are 20.78 percent.

We have shown the demography's diagram in the appendix at Fig:1.

Logit Model for assessing SMEs loans

The single period logit model tries to predict the probability of success of SME loans with a binary dependent variable *y*i, which takes the value 1 for firm *i* if its loan helps fostering the business and 0 if firm *i*fails, conditioned on a set of covariates *z*i. Modeling this with a logit makes the regression equation:

Our results at Table:6 show that cumbersome loan procedure is notably hindering success of SME loans, while reasonable interest rate has insignificant impact. Further, the results show that SME loans are successful in self-employment creation. Probability of success in SME loan can be seen from the results placed above. As such null hypothesis is accepted i.e. Ho: SME Loan has positive impact.

Table : 5 Demographics of the SMEs borrowers(Respondents) from the Banking sector

Description	Category	Total Number	Percentage
Gender	(a)Male	207	67.21
	(b) Female	101	32.79
Level of education	(a) Below SSC	54	17.54
	(b) Above SSC to HSC (class 10-12)	101	32.79
	(c) Above HSC to Bachelor Degree	97	31.49
	(d) Above Bachelor Degree	56	18.18
Age	(a) 18 to 28 years	43	13.96
	(b) 29-39 years	112	36.37
	(d) 40-50 years	67	21.75
	(e) 51 years and above	86	27.92
Experience	(a) Less than 3 years	46	14.94
	(b)More than 4 up to 7 years	60	19.48
	(c) More than 8 up to 11 years	145	47.08
	(d) More than 12 years	57	18.50
Social prestige rises due to SME s business	(a) Yes	123	39.94
	(b) No	185	60.06
Net income received per month	(a) up to Taka 20,000	49	15.90
	(b)Taka 20,001-40,000	64	20.78
	(c) Taka 40,001-60,000	55	17.86
	(d) Taka 60,001-80,000	57	18.51
	(e) Taka 80,001-100,000	56	18.18
	(f)>taka 100,001	27	8.77

(Source:Survey)

Appendix:

Fig : 1 Demographics of the SMEs borrowers(Respondents) from the Banking sector

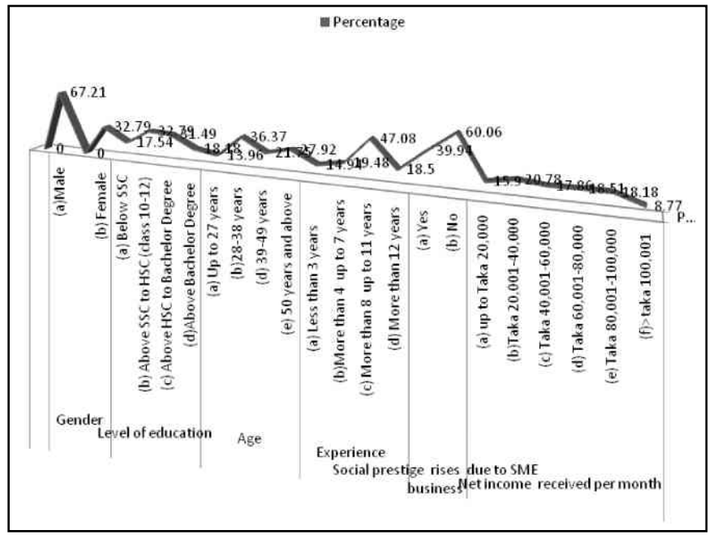


Table: 6 Result of the Logit model

Dependent Variable: SMEL				
	C	**PSLC**	**IRR**	**SMESE**
Coefficient	1.29	-2.09	0.47	2.63
Std. Errors	0.78**	0.77*	0.38***	0.32*
McFadden R-squared	0.304712	LR	statistic	118.7589
Total obs	308			
*p=.001, **p = .09. ***p = .20				

(Source : Estimated)

Now we shall show the results of the likert scale in Table:7 based on eleven questions:

Table: 7 Compilation of the result of the respondents answer starting from strongly agree to Strongly disagree

Sl. No.	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Loan application and supporting documents are huge and time consuming	126	89	33	27	33
2.	Start up cost is easily arranged	21	27	41	82	137
3.	Financial problems may cause to loan default	43	75	69	64	57
4.	Non-financial problems may also create loan default	34	69	46	73	86
5.	Conflict of partners may create problem	52	64	46	75	71
6.	Adequate support received from the bank to expand business	19	28	44	92	125
7.	Requires extra money/bribe for getting SME loan	77	128	51	29	23
8.	Behavior of the bank personnel with borrowers are excellent	39	14	59	75	121
9.	Loan repayment schedule is appropriate	19	30	77	83	99
10.	SME loans rule and regulation of bank should be easy	105	83	47	41	32
11.	Expectation from the bank for more logistics, operational, marketing and export services etc.	79	111	63	45	10

(Source: Survey)

From table:7,the study observes that in case of the question on loan application and supporting documents are huge and time consuming strongly agreed was 126 while strongly disagreed 33 respondents. In case of the startup cost is easily arranged was supported strongly agreed by 21 while 137 respondents strongly disagreed. Financial problems may cause to loan default 75 respondents agreed while 68 remains neutral. Non-financial problems may also create loan default disagreed by 73 respondents while 86 respondents strongly disagreed. Conflicts of partners may create problem agreed by 64 respondents wile 75 person disagreed. Adequate support received from the bank to expand business strongly agreed by 19 respondents while 125 respondents strongly disagreed that they do not have any support to expand.

In case of question, requires extra money/bribe for getting SME loan strongly agreed by 77 respondents while 123 respondents agreed. Behavior of the bank personnel with borrowers are excellent strongly agreed by 39 respondents while 14 only agreed but strongly disagreed by 121. Loan repayment schedule is appropriate is strongly agreed by 19 while 99 respondents strongly disagreed. SME loans rule and regulation of bank should be easy is strongly agreed by 105 respondents while 83 agreed. For the question expectation from the bank for more logistic, operational, marketing and export services etc. 79 respondents strongly agreed while 111 respondents agreed. This means that expectation of the borrower is not limited to the access to the loan but also other related services of their small and medium businesses.

From table:4 we observed that borrowers want more innovative, corruption bribe free services, good behavior, easy loan processing , helping attitude services from the banking sector. Corresponding Fig. of Table: 7 is also given in the appendix.

Now we shall see reliability statistics in table:8.

Table : 8 Reliability Statistics

Cronbach's Alpha	N of Items
.704	11

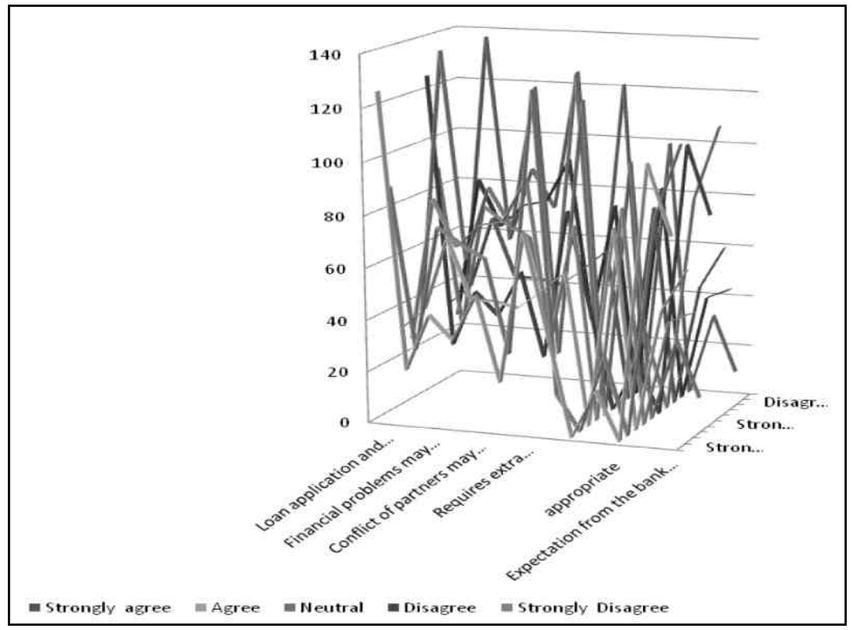
(Source:Estimated)

In table: 8 we observed that the alpha coefficient for the eleven items is .704, suggesting that the items have internal consistency.

Conclusion and Recommendations

Bangladesh must increase double digit ratio to GDP rather than 6.7% in the year 2012 from the contribution of the SMEs. Still commercial banks of the country are not sincere to SMEs financing of the country.As such despite financial inclusion policy of the Central Bank but progresses of creating new

Fig : 2 Respondents answer of eleven questions starting from strongly agree to Strongly disagree



entrepreneurs are not up to the mark.As such conventional banking should be replaced by innovative banking. Government already undertook seventh five year plan from 1st of July 2015.Plan should be properly implemented. Remarkable development in the progress of poverty reduction has been occurred which will be below 10% when Vision 2021 will be fulfilled. To attain international benchmark of SMEs,pro-SME rules and regulations, government initiatives and both physical and social infrastructural development including institutional development are required which will provide sustainable growth of SMEs. Not only central bank's (Bangladesh Bank) wish and guideline is sufficient but also commercial banks and other financial institutions which deals with SMEs must be efficient one as Asian Development Bank (2014) advocated for increasing bank efficiency.

International Finance Corporation (2010) 's idea regarding banks to put more emphasis on SMEs for which using competitive intelligence and rivalry reaction is required. Not only in the domestic sector but also in the global sector through export more income can be generated in the economy. On the other hand in the industrial sector if SMEs can be properly guided they can work as an import substitution industrialization sector. When holistic way financial sector will be restructured for SMEs financing then shadow economy of the country will be decreased and contribution of formal economy will rise and accelerate the economic growth which ought to be accompanied by the fulfillment of basic needs of the poorer section so that poverty can be reduced.

anbold (2008) rightly pointed out that SME finance is related to relationship-intensive banking. Banking sector as a whole should undertake holistic approach for entrepreneurs of the SMEs to provide services starting from the domestic market to the international market. SMEs should be well acquainted with environmental friendly projects so that green industries can get importance. Private sector of the country has under gone through a shift of paradigm especially through SMEs. Development of legal frameworks and pro SME friendly fiscal and monetary policy, modern banking mechanism and infrastructural development are essentially needed. Moreover, public and private partnership should be developed through eradication of bureaucratic mannerism so that SMEs of the country can be able to contribute in the economic expansion with greater enthusiasm and zeal. World Bank (2012) justifiably commented that financial right of entry is serious for SME expansion and progress, and the accessibility of outer finance is definitely linked with productivity and development. Up to certain level to become micro and small entrepreneur, formal education may not be essential but for expanding business, efficient and effectiveness and sustainable growth there is no alternative but have formal education. Further, those who want to become techno entrepreneur they must have good outcome based management education.

Policy makers of the country ought to arrange to obtain better institutional support, infrastructure, ease of rules and regulations of lending, corruption free banking system, corporate governance and eliminating gender biasness of SMEs funding. SMEs financing should be given more importance to the industry sector than the business sector. Creation of industry under environment friendly atmospheres will help to achieve the target of creating employment opportunities and generating income.

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Science, Technology and Innovation in India since Independence

Ganeswar Sahoo*

India has witnessed a significant change in its science and technology infrastructures since independence. Today India is considered a knowledge superpower with humungous growth in science, technology and its contribution in innovation to the world. The papers is about the study of innovation in pre and post independent India and to what extent India's science and technology infrastructures touches a new height today. This paper studies brief history of science, technology and patent to understand the position of India before Independence from Britain. Methodologically, the paper adopts a qualitative study compiling data on key innovation indicators – such as input measure (Workforce and Educational Infrastructures and Science and Technology Infrastructures) and output measure (R & D and Patents) of innovation. Besides contribution to the existing literatures, the paper found India's R & D initiative still faces major challenges. India's policy on tax incentives is centralized to few sectoral benefits that the innovation is limited and recommends a policy change.

Keyword: Science, Technology, Innovation, India, BRICS, Patent and R & D

Introduction

India has been a land of history and heritage of both invention and innovation. The history of science and technology in the Indian subcontinent is as old as the prehistoric period (5500 BC), and is believed to be continued through the Indus Valley Civilization (Kenoyer, 2006). India's innovation is well inhered from the iron works in the Vedic period of India (composed roughly between begins1700 – 1100 BCE and ends 500 -150 BCE) (Witzel, 2003). Tewari (2003) found that the period of iron melting, iron artefacts and the practice iron technology could be calibrated and believed the early 13th century BCE by the Indus Valley Civilizations in the Indian subcontinent.

The world has been witnessing the valuable contributions of India in the field of science and technology. Whether it is number zero or mathematical formulas, history has recorded India's scientific tradition from the ancient era. The conceptualization of squares, rectangles, circles, triangles, fractions, the ability to express the number ten to the twelfth power, algebraic formulas, and astronomy had even more ancient origins in Vedic literature, some of which was compiled as early as 1500 B.C.The concepts of astronomy, metaphysics, and perennial movement are all embodied in the Rig Veda (seedas and Polytheism, ch. 3). Technological discoveries have been made relating to pharmacology, brain surgery, medicine, artificial colors and glazes, metallurgy, recrystallization, chemistry, the decimal system, geometry, astronomy, and language and linguistics (systematic linguistic analysis having originated in India with Panini's fourth-century B.C. Sanskrit grammar, the Ashtadhyayi). These discoveries have led to practical applications in brick and pottery making, metal casting, distillation, surveying, town planning, hydraulics, the development of a lunar calendar, and the means of recording these discoveries as early as the era of Harappan culture (Harappan Culture, ch. 1).

The Mughals, an imperial power in the Indian subcontinent from about 1526 to 1757, had developed and contributed many techniques that included "the technology of textile production, hydraulic engineering, water-powered devices, medicine, and other innovations, as well as mathematics and other theoretical sciences" (US Library of Congress). India has also produced many talents in the world of science and technology inventions. One of the most famous scientists is C. V. Raman who credited for the Raman Effect for which he was awarded Nobel Prize in physics in 1928. Dr. Homi Jehangir Bhabha, an eminent physicist, who is known for his enormous contributions to the fields of positron theory, cosmic rays, and muon physics at the University of Cambridge in Britain. Other eminent scientists include Sir Jagadish Chandra (J.C.) Bose, a Cambridge-educated physicist "who discovered the application of electromagnetic waves to wireless telegraphy in 1895 and then went on to a second notable career in biophysical research" (see Country studies; US Library of Congress). Recently the Higgs -Boson was named after him. So, India has always been a well-respected place in science and technology.

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Innovation in India:

India has witnessed a tangible change in Innovation post –Independence. As the output measure, R & D and Patents are known as the key output indicators of innovation growth. Table 1 (innovation indicators as the measurement of innovation) shows the progress and innovation - structures of India. As measurement method, social scientist and innovators used various indicators as growth of innovation which can be easily categorized in to three segments (Table 2).

In the post-independence era (1947 onwards), India realized that science and technology were the key elements of economic growth. The then first prime minister of India Pandit Jawahar Lal Nehru declared "It is science alone that can solve the problems of hunger and poverty, of insanitation and illiteracy, of superstition and deadening custom and tradition, of vast resources running to waste, or a rich country inhabited by starving people. Who indeed could afford to ignore science today? At every turn we have to seek its aid. The future belongs to science and those who make friends with science".Prioritizing science as key to growth and success, India's first national laboratory 'Council of Scientific and Industrial Research (CSIR)' was set up in the 1950's and now consists of a network of 40 laboratories, and is considered as the central to innovation progress in India. Keeping on the skilled

Table 1: Exponential Growth of Innovation Indicators

Decades	50s and 60s	70s	80s	90s
Main Indicators used	R & D	R & D	R & D	R & D
		Patents	Patents	Patents
		Technological Balance Of Pay ments	Technological Balance Of Payments	Technological Balance Of Payments
			High tech Products and sectors	High tech Products and sectors
			Bibliometrics	Bibliometrics
			Human Resources	Human Resources
			Innovation surveys	Innovation surveys
				Innovations mentioned In technical literatures
				Survey of Production Technology
				Intangible Investment
				Productivity

Source: Mani, Sunil (2009); Centre for Development Studies, India

Table 2: Indicators of Innovation Activities

Input Indicators	Output Indicators	Other Indicators
Educations and HRD expenditures	Bibliometric data	Technology Balance of Payments
		Technolgy Content Exports
R & D Expenditures	Patents	Total Factor Productivity

workforce to be produced, some of the world class educational institutes such as Indian Institute of Science (IISc, Bangalore was founded much earlier in 1909 by J. N. Tata in the British India and University Grant Commission (UGC) granted status as deemed university on 12th May 1958), Indian Institute of Technology (1951, to create and train elite scientists and engineers), Indian Institute of Management (first IIM Calcutta estd. 1961 to create and train professionals for business and entrepreneurship), Institute of Mathematical Science (estd. 1962 for fundamental research in frontier disciplines of the mathematics and physical sciences), Indira Gandhi Centre for Atomic Research (estd. 1971 previously known as The Reactor Research Centre under the Department of Atomic Energy), Indian Institute of Information Technology (first IIIT Allahbad estd 1999 and recognised as deemed university in 2000, to fill the gap of skills required by Indian IT firm and foreign MNCs), National Institute of Technology (NIT: 2002, to create greater capacity of elite science and technology professionals), and Homi Bhabha National Institute (HBNI: estd. 2005 a premier research institutes for atomic research and development) were established. It is worth to be noted here that some well-known much earlier institutions such as University of Calcutta (estd 24th Jan. 1857), University of Mumbai (estd. 18th July 1857, known as University of Bombay until 1996) and University of Madras (estd 5th Sep. 1857 by Legislative Council of India), were established which are even today considered as the premier educational institutions in the country (Source: University Grant Commission).

Workforce and educational infrastructures

India produces thousands of young bright scholars every year. Today, India is often considered as the knowledge superpower with 639 universities, 39 institutes of national importance, and 29 autonomous higher institutes. The number of Universities/ University-level institutions has increased 18 times from 27 in 1950 to 504 in 2009.The number of colleges has also registered manifold increase with just 578 in 1950 growing to be more than 30,000 in 2011 (Source: Ministry of HRD, Govt. of India). This increase in education and educational infrastructures shows a positive policy impact of the innovations.

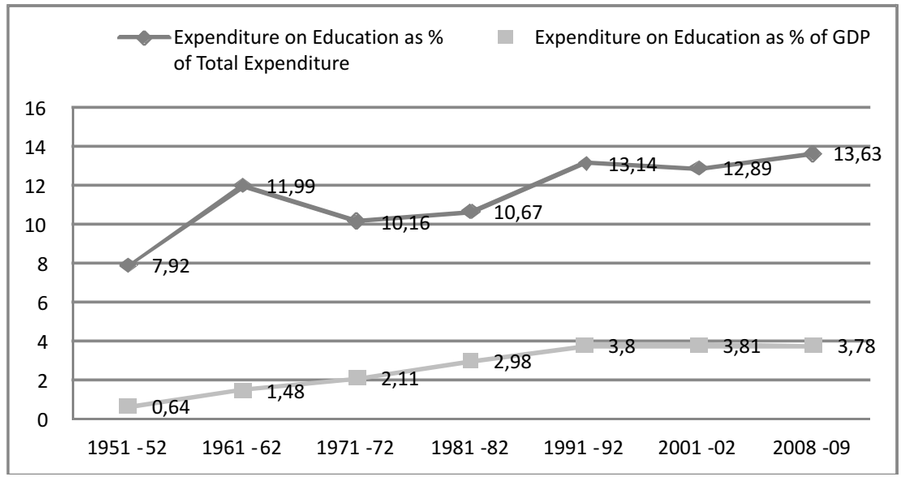
India ranks eleventh in the world in its number of active scientific and technical personnel. Including medical personnel, they were estimated at around 188,000 in 1950, 450,000 in 1960, 1.2 million in 1970, 1.8 million in 1980, and 3.8 million in 1990. India's universities, university-level institutions, and colleges have produced more than 200,000 science and technology graduates per year since 1985. Doctorates are awarded each year to about 3,000 people in science, between 500 and 600 in engineering, around 800 in agricultural sciences, and close to 6,000 in medicine. However, in 1990 India had the lowest number of scientific and engineering personnel (3.3) per 10,000 persons in the national labor force of the major Asian nations. For example, Japan, had nearly seventy-five per 10,000 persons , South Korea had more than thirty-seven per 10,000, and China had 5.6 per 10,000 (see "India – Science and technology"; US Library of Congress).

Table 3: Growth of Recognized Institutions

Sl. No.	Types of Institutions	1950 - 51	1970 - 71	1990 - 91	2010 - 11
1	Central Universities	27	82	184	43
2	State Universities				256
3	State Private Universities				80
4	Institution established through state legislation				5
5	Institution deemed to be universities				130
6	Colleges for general education	370	2285	4862	33023
7	Colleges for professional education	208	992	886	
	Total Institutions of Higher Education	**605**	**3359**	**5932**	**33537**

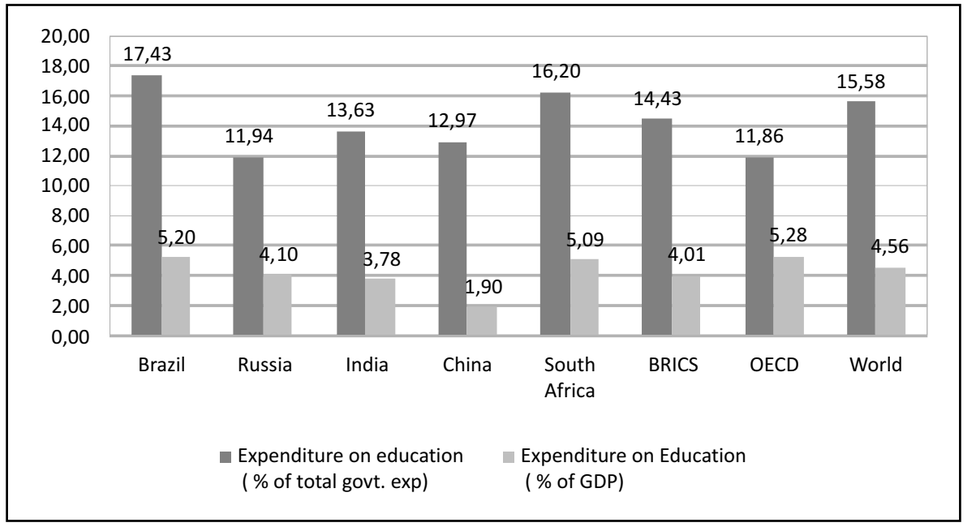
Notes: Data includes agricultural, veterinary, medical, architecture, engineering/technical, open universities and other colleges. Source: University Grant Commission (data 2010-11), Ministry of HRD (data 1950-91), Govt. of India

Figure 1: India's Public Expenditure on Education



Note: 2008-09 data provisional, Source: Ministry of HRD, Govt. of India

Figure 2: Public Expenditures on Education in the year 2008



Note: China data refers to year1999, India data refers to FY 2008- 09 provisional; Indian Financial Year (FY) starts on 1st April and ends on 31st March every year
Source: World Bank; Ministry of HRD, Govt. of India (only for India data);

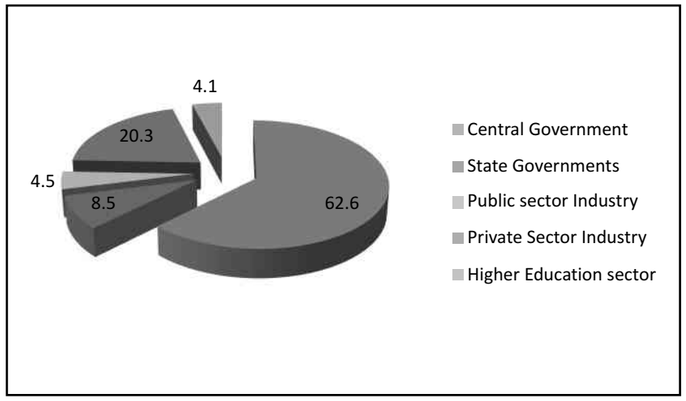
On the other side, figure 2 showed a comparative study of India's public expenditures on education with BRICS countries, OECD and the world. India spent a low per cent age of GDP, i.e., 3.78% of GDP just above China (1.9%), while OECD average expenditure on education accounts as 5.52%, whereas BRICS average and the world average are 4.15% and 4.56% respectively. When we compare the educational expenditures as percentage total government expenditures, India (13.63%) is above Russia (11.94%), China (12.97%) and OECD average (11.53%), but India spends a lower portion of total governmental expenditures on education in comparison to Brazil (16.82%), South Africa (19.2%), BRICS (14.91) and the World average (15.58%). Ghosh (2011) studied that India's public spending on education to GDP is less than a quarter of the equivalent ratio in Cuba, but even well below the expenditures of other developing countries such as Kenya, Malawi and Ethiopia. On quality of education, she inspected that "institutions in backward areas and in educationally backward States tend to be both underfunded and of poorer quality than institutions in metros or in more educationally developed States".

On the other hand, comparing the number the researchers with other countries, India witnesses a comparably lower number researchers. India has 140 researchers per thousand populations whereas the same for Sweden, Japan, Denmark and U.S.A. was 6139, 5546, 5277 and 4651 respectively. However, in terms of total researchers, USA tops the list with 1.39 million researchers followed by China and Japan with 1.215 million and 0.71 million researchers respectively (Ministry of HRD, R & D report). So, this data shows India is far behind. So,right policies and resources should be implemented to tackle the global competition scenario.

Science and Technology Infrastructures

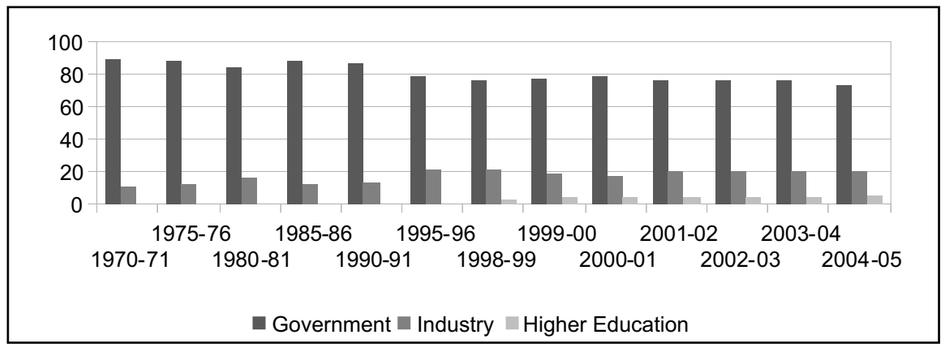
At the time of Independence, India's science and technology infrastructures were neither strong nor organized, and India was a technology dependent country, particularly, to the developed world.The post-independence era, India valued science and technology infrastructures as base of its growth and development. Scientific research and technological developments have received substantial political support and governmental funding. India initiated policies to promote and develop its technological base, moreover to be a technology independent country. India started five- year plan, which are based on fulfilling short term needs while aiming to provide the institutional base needed to achieve long-term goals. In 1951-56 by its first Prime Minister Jawaharlal Nehru, India had given prioritizing to science and technology such as transport and communications (24%), industry (8.4%), irrigation and energy (27.2%) etc. In 2nd five year plan (1956-61), it focused on heavy industry such as power and irrigation. During this period, the Atomic energy commission was formed in 1958 and Tata Institute of Fundamental Research was established (see GOI web on S & T).

Figure 3. Share of R & D expenditures in 2002 (per cent age)



Source: R & D Statistics report; Dept. of Science and Technology

Figure 4. Sectoral performance of GERD* in India, 1970-71 through 2004-05 (% of shares)



Source: Mani, Sunil (2010); Appendix Table No. 1
**GERD: Gross Domestic Expenditure on Research & Development*

The Government of India established the Ministry of Science and Technology in 1971 to formulate science and technology policies and implement, identify, and promote "frontline" research throughout the science and technology infrastructure (Planning Commission). By the 1980s India had already developed science and technology establishments. Advanced scientific and technology infrastructures had developed over the years.

Research as an input indicator measures resource, both financial and human capital, devoted during the period of the program. In concerned to the resources allocation, central government contributed a major share (75.7 %), whereas state government contributed 9.3 per cent and private sector contribution was15% in 1992. In year 2002 the share of R & D expenditures by the central government had reduced to 62.6% due to participation of other entities.

India demonstrated a sharp change in expenditure on R & D during the period of 1970 to 2005. Figure 4 shows India's performance on Gross Domestic Expenditure on Research & Development (GERD). The figure shows the governmental investment is constant but industry participation has increased. Undoubtedly it was a green sign for the developing India as it witnessed a growing privatization of Industrial R & D and the share of the industry in performance of R & D has doubled during that period. Higher education sector contributed to the sectoral performance from 1998-99.

Table 4. Industry wide distribution of Industrial R & D

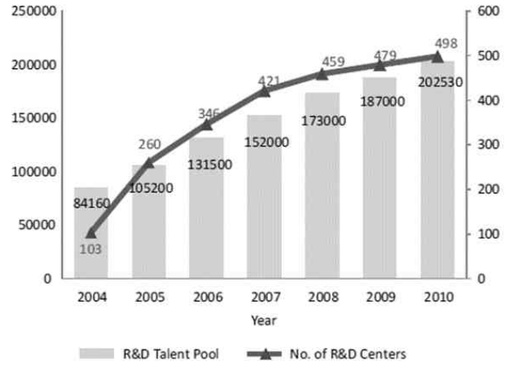
Industry	Share
Metallurgical Industry	4.21
Fuels	6.12
Electricals and Electronic Equipments	8.94
Telecommunications	3.75
Transportations	15.16
Industrial Machinery	1.84
Agricultural Machinery	1.33
Chemicals (other than Fertilisers)	8.35
Drugs& Pharmaceuticals	19.3
Defence Industries	8.32
Information Technology	4.69
Biotechnology	1.59
Misc. Mechanical Engg.	1.22
Miscellaneous Industries	15.18
Total	**100**

Cumulative shares in per cent 1998-99 through 2002-03
Source: Mani, Sunil (2010)

India's industry wide distribution of R & D was purely meant for the high tech, chemical and defence industries during the period of 1998-99 through 2002-03 which accounted 75.09% of total R & D (Table 4). The measure eight industries such as Metallurgical, automotive, electrical and electronics equipment, transportations, chemicals, drugs and pharmaceuticals, defence IT were having a bigger share of R & D expenditures. Drugs and Pharmaceuticals alone spent 19.3% R & D crediting as biggest R & D expenditure followed the Transportation accounted 15.16% claimed the second highest R & D expenditure during that period. It's clear that India's R & D expenditures were meant for strengthening the physical infrastructures as well as superior innovations in the drugs, chemicals, electronics and defence. Mani (2009) points out that India's national system of innovation is dominated by the sectoral system of innovation of the pharmaceutical industry and automotive industry. He further experiences that the auto parts subsector has rather high export intensity of nearly 20% which means there has been a continuous investment on technology in subsector to meet the technological requirements of foreign buyers.

The figure 5 shows that there has been a curve of growth both in R & D centres and R & D talent pools in India since 2004 to 2010. The CAGR is estimated 30% in R & D centres and 15.7% in R & D talent pools over the period. Many research findings pointed out that most of quality R & D is being done by MNCs

Figure 5: Trends in Growth of R & D Centres and R & D Talent Pools in India

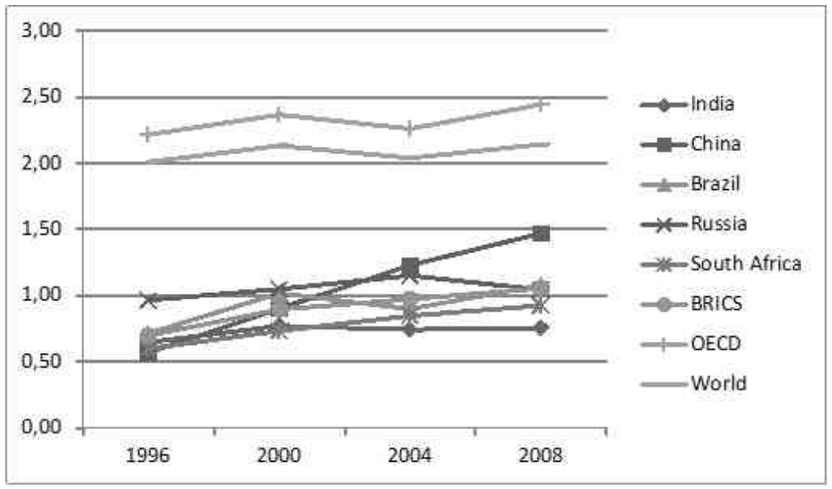


Source: Battelle India, India R & D 2011, FICCI, pp.5

that work in India for their internal benefits and other fundamental researches are carried out by the academics. Also, most of researches done by public sectors lack market values as compared to the R& D being carried out by profit oriented private sector that focuses on cutting-edge R & D activities that creates innovation at a globalized way. So, the research spillover is limited within certain boundaries and the research benefits are still not fully exploited by the all sections of the knowledge societies which cause "externality loss" or "efficiency loss". This is considered a measure issue why India still lags behind many developing and developed countries.

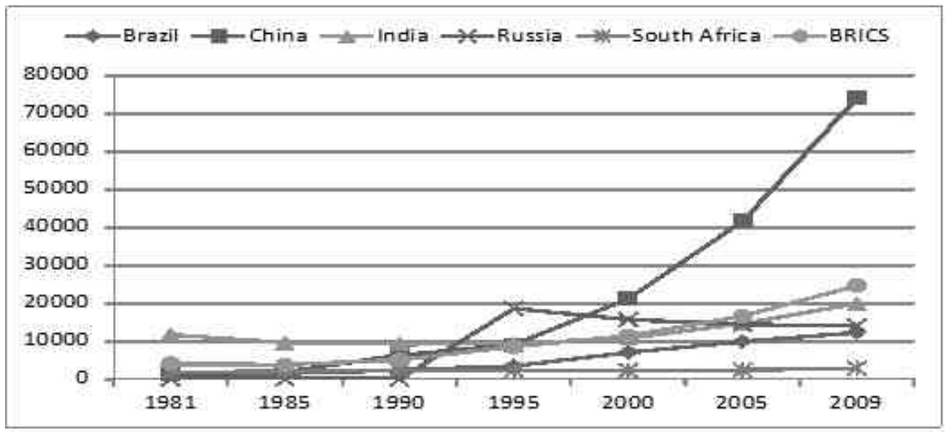
The figure 6 gives a clear picture of India's R & D expenditures in comparison to BRICS, OECD and the world average. While the world average spending on R & D is around 2.1% and OECD average from 2.2 to 2.4 per cent, India spends as low as 0.64% to 0.76%. All the BRICS economies spend more on R & D by the year 2008. China being a measure economy spends around 1.469% but India still spends less than 1% which urges a policy intervention and political willingness.

Figure 6: R & D expenditure as % of GDP



**India 2008 data from the year 2007, South Africa 1996 data from 1997 and data 2000 from 2001*
Source: World Ban

Figure 7: Scientific and Technical Journal Articles



Source: World Bank

As an innovation indicator, scientific journals show how a country is using its talents and resources in generating ideas and pre-innovative capabilities. In contribution to the scientific and technical journal articles, India topped among BRICS countries from the year 1982 to 1995 and also India was quite above the BRICS average during that period, but in 1995 Russia became the top contributor among the BRICS countries. The World Bank statistics shows that India has contribution lower than the BRICS average from the year 2000 to 2009.

Patenting Trends in India:

Indian patent system has a long history back to the First Patent Act VI of 1856 in the British India which was based on the British Patent Law of 1852. The main objective of the patent act was to encourage inventions of new and useful manufactures and to induce inventors to disclose secret of their inventions. India's patent laws and policies were made in the United Kingdom in the Pre-Independent India. In 1911, The Indian Patents and Design Act of 1911 was enacted by the British Government of India and was replaced all the previous act concerning all types of Intellectual property in British India, including patents, copyrights, industrial designs and trademarks. However, after Independence from the British, following the decades of criticism that it offered insufficient protection to the inventor, India reviewed and replaced completely the Patent Act 1911 by a separate patent act called Indian Patent Act 1970 and with further amendment in 2002.

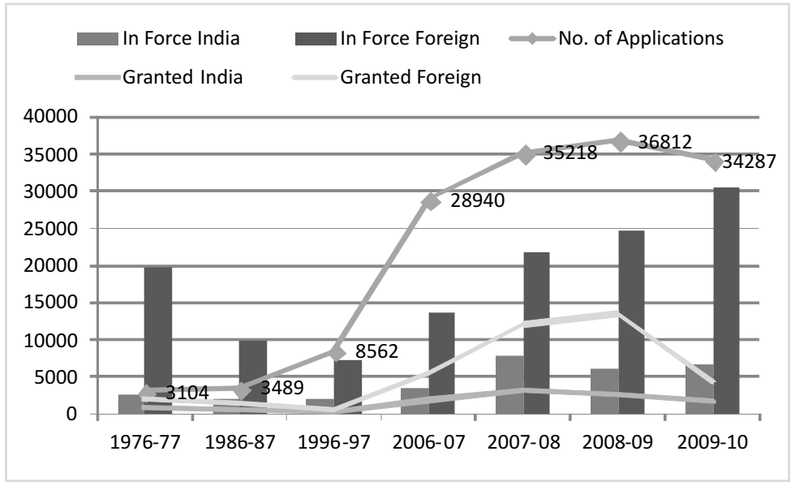
The Indian Patents and Designs Act 1911 that was legislated during the British government, was believed to be poorly protecting the inventions. Following complains and dissatisfaction from the Indian inventors, the government of India legislated new policy on patents known as The Indian Patent Act 1970 which came into force on 20th April 1972. This patent act 1970 changed the structure of patenting that resulted a move away from product patents to process patents which had a major impact on Indian drugs and pharmaceuticals industry (Dhar & Gopal Kumar, 2011).

Patent Applications as output indicator of innovation show how the innovation is being utilized through the provision of goods and services. During the period of 1976 to 2009, India achieved tremendously in patent applications which provide India's innovation capabilities at a wider perspective. From the graph 9, it is clear that India suffered a downside in the patent race domestically during the period 1986 to 1996, but then it marked an enormous growth. The graph 9 shows foreign patents are in a dominant position throughout the period. The total number of patent applications filed during the period 2009-10 was 34287 compared to 36812 in the previous year resulting a decrease of about 6.86%. The number patent application filed by Indian in 2009-10 was 7044 which is estimated an increase of 12.54% over the previous year where 6161 patent applications were filed.

Table 5: Brief History of Indian Patent System

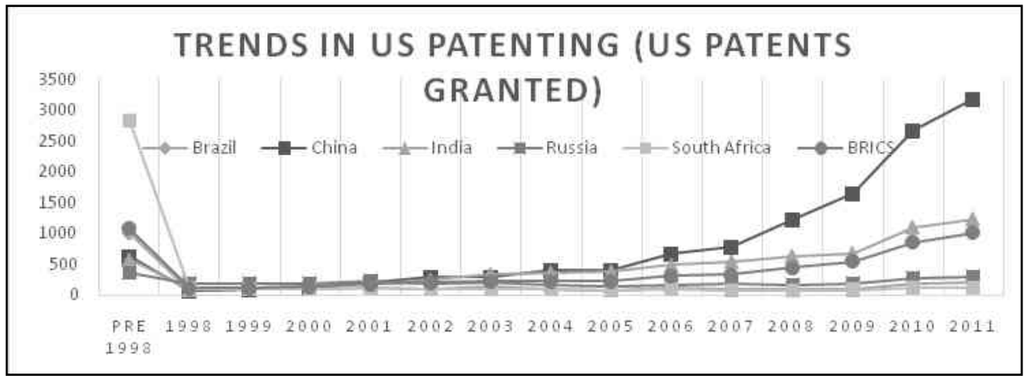
Year	Changes in Patent Policy
1856	The Act VI of 1856 on protection of inventions based on the British patent law of 1852. Certain exclusive privileges granted to inventors of new manufacturers for a period of 14 years.
1859	The Act modified as Act XV; patent monopolies called exclusive privileges (making. Selling and using inventions in India and authorizing others to do so for 14 years from date of filing specification).
1872	The Patents & Designs Protection Act.
1883	The Protection of Inventions Act.
1888	Consol idated as the Inventions & Designs Act.
1911	The Indian Patents & Designs Act.
1972	The Patents Act (act 39 of 1970) came into force on 20th April, 1972
1999	On 26 th March, 1999 patents (amendment) act, (1999) came into force from 1st January, 1995
2002	The Patents (amendment) Act 2002 came into force from 20th May, 2003
2005	The Patents (amendment) Act 2005 effective from 1st January, 2005

Figure 8: Patents Applications, Granted and In-Force in India



Source: Controller General of Patents, Design and Trade Marks, Govt. of India

Figure 9: Trends in US Patenting of Indian Inventors,



1998 -2011 (utility patents granted)
Source: USPTO

Statistics further says that the compounding annual growth in patent grants during period 1976-77 to 2009-10 for India and foreign were 1.9% and 2.5% respectively, while compounding annual growth for patent in-force for the same period of India and foreign were 2.78% and 1.33% respectively. The statistical figure between 1999-2000 and 2009-2010 gives evidence that the compounding growth rate in Indian patent application was 8.15% whereas the foreign application was 12.15%.

Patent as recognition of the importance of human intellect plays a significant role in this techno-scientific age. It has been widely accepted the exploitation of resources beyond geopolitical boundaries and has seen as symbol of progress of a country's innovativeness at the global stage. We also agree that the maximum protection of IP can help the country to maintain a continuous growth to the sustainable developments. So, patents which measure the country's ability in R & D and innovation identify whether the research activities are clusters or scattered.

The growing economic activity and patents reforms pushed a significant change in India's patenting landscape. With rapid technological development and innovation, India has witnessed a measure economic growth in recent years. India's IT sector which has contributed a measure portion to its economy is believed to be a major factor for the overall growth scenario. India with its administrative measures and various policy reforms has strengthened its IP infrastructures which lead the country a tremendous success of IP through licensing, commercialization and enforcement.

There is a similar result in European patents. The table 8 states that India is in 2nd place after China in patent grants. The CAGR of India was 23% where as China topped the list with 39% and the BRICS average was 21%. When we study about the patent application, China has a humongous growth in patent applications, more than 10 times of Indian patent applications in 2011 alone, but China has an extremely poor success rate in patents grant. While India had 10% the ratio of patents granted to total number of applications, China poorly managed to 3% patent grants of total applications 61664 during the period 2002 to 2012.

Figure 10 shows India is above BRICS average in US patents granted. China tops the list among the BRICS nations.

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Japan Patent Office statistics says Chinese topped the BRICS country both in patent filings and grants, but had a low grant ratio in comparison with the Indian counterpart. Amid an intensifying global competition, India among the BRICS countries shows a continuous progress in patenting that measures country's technology progress. This ameliorative effect provides a signal that India's technology amenities are in better stage than ever.

Furthermore, the relationship between patents and R & D expenditures shows the coherence of rich and poor countries and the patent race. Patent as a measure of country's technological change shows a varying result of R & D expenditure and patent filings.

Table 7: Patents Applications and Issued by Japan Patent Office in 2010

Country	Applications			Grants			Grants ratio
	Direct	PCT	Total	Direct	PCT	Total	
Brazil	11	71	82	2	20	22	27%
China	424	639	1063	92	163	255	24%
India	21	141	162	10	82	92	57%
Russia	5	35	40	0	17	17	43%
South Africa	4	47	51	1	29	30	59%

Source: JPO 2012

Table 8: Number of resident patent filings per $ million R & D expenditures

Country	2001	2002	2003	2004	2005	2006	2007	2008
Australia	0.51	0.47	0.44	0.43	0.39	0.38	0.31	0.29
Canada	0.34	0.30	0.32	0.42	0.40	0 .43	0.38	0.39
China	1.65	1.90	2.18	2.13	2.36	2.52	2.57	2.79
Denmark	0.63	0.65	0.60	0.61	0.56	0.50	0.54	0.48
France	0.58	0.56	0.54	0.59	0.58	0.60	0.58	0.57
Germany	1.15	1.09	1.09	1.09	1.09	1.08	1.01	1.01
India	0.95	0 .99	1.22	1.16	1.10	0.95	0.93	0.83
Russia	2.65	2.16	2.06	1.75	1.86	2.26	2.10	1.94
UK	1.04	0.99	0.97	0.92	0.88	0.84	0.80	0.71
USA	0.79	0.83	0.90	0.89	0.97	0.98	1.01	0.91

Source: WIPO statistics database and World Bank (World Development Indicators); Dec 2011
Note: R & D expenditures in million US $ are in billions of US $, based on 2005 purchasing power parities and lagged by one year to derive the resident patent filings to R & D ratio.

India can be compared with the US in terms of number of resident patent filings per million $ R & D expenditure. Statistics gives evidence that 0.95 number of patent filings for million $ expenditures in India, while US has 0.79. Other developed countries such as U. K., Denmark, Australia, Canada etc. have even lower number of patents filings. Though Russia and China are ahead of other countries, but questions are raised about the quality of patents and its contributions to the technological growth and innovation. Study of technology-wide patents grant is important as it gives a coherence study of R & D effect.

Studying the sectoral patents grants, table 11 states that most patents were granted to chemicals, mechanicals and drugs, and other industries such as food, electrical, machinery parts were given little importance. It is the coherence effect that most R & Ds have been done to the respective sectors where patent applications are comparably high.

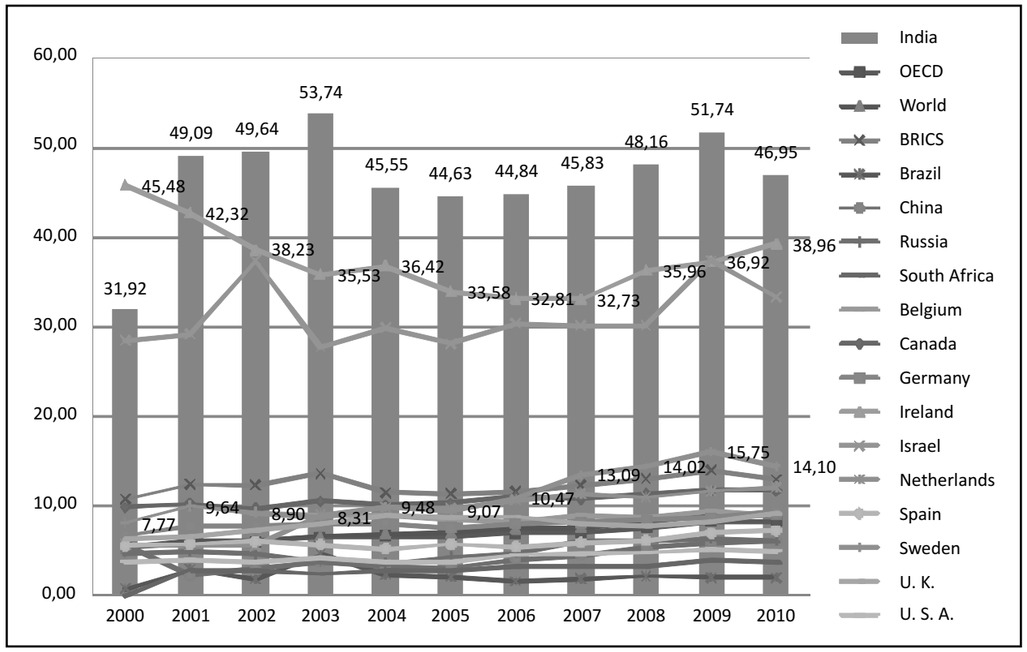
India achieved tremendous success in IT service exports and became the largest exporter of ICT services in the world. The figure 10 gives a clear image of India and its position in the world. India has been continuously on top in ICT service exports since 2001. It's undoubtedly well-defined that India

Table 9: Technology-wide distribution of patents granted in India, 1999-2000 to 2006-07

Year	1	2	3	4	5	6	7	8	Total	1+2+7
	Chemical	Drug	Food	Electrical	Mechnical	Computer/ Electronics	Bio - Technology	General		
1999-2000	516	307	250	147	569			92	1881	823
2000-01	353	276	72	142	254			221	1318	629
2001-02	483	320	36	139	311			302	1591	803
2002-03	399	312	67	118	228			255	1379	711
2003-04	609	419	110	396	539			401	2474	1028
2004-05	573	192	67	245	414	71	71	278	1911	836
2005-06	1140	457	110	451	1448	136	51	497	4290	1648
2006-07	1989	798	244	787	2526	237	89	869	7539	2876

Source: Mani (2011, p.50)

Figure 10: ICT Service Exports (% of service exports, BoP)



Source: World Bank Statistics 2011

has been incessantly growing its position at the international market as an IT global leader. India's vast population is considered as a boon to the nation and its English language is often recognized as an incentive for this achievement.

The skilled IT workers of India who are able to exporting the world's half of the IT services are to be believed a major contribution to its 1.8 trillion (GDP nominal) economy. In the last two decades, the Indian IT/ITES industry has contributed significantly to the Indian economy in terms of GDP, foreign exchange earnings and employment generation. A joint study report by the National Association of Software and Service Companies (NASSCOM) and the global consultancy firm Deloitte says the IT Contribution to the Indian GDP has been steadily increasing from a share of 1.2% in financial year 1998 to 5.2% in the financial year 2007. In studying the forex reserve, the report says export earnings in the financial year 2008 stood at approximately US $ 40 billion with a growth of 36%. On employment generation, the study further states the direct employment in the sector is expected to be 2.0 million by end of FY08, growing at a CAGR of 26% in the last decade, making it the largest employer in the organized private sector of the country. India, with 53.7% of services sector contributions to total GDP and 523.5 million work forces, is expecting to fuel the growth in the smartphones, e-commerce 2.0, banking and telecom (Business Map of India & Deloitte, 2012).

Concluding Remarks and Policy Implications

The study shows how India's long exertion to be a successful innovative nation in the world. The country, since the Independence from the Britain, has successfully managed its manpower, both tangible and intangible resources to compete in the global stage. The multi-fold growth in physical and e-infrastructures and with its vast population, India is still contending severely to shape its image at a wider perspective. But, India has still to go a long way for enabling innovation of global dimension and it has to purse a more innovative and collaborative research environment with a strong scientific workforce which is essential to positioning it as a global innovation leader in the world.

The input indicators of innovation activities are education expenditures and R & D expenditures, Education, considered being a major turning point with its integrated effort in managing its huge population, have shown a positive growth. Though there have been a manifold growth in educational institutions but very few institutions are considered to be in elite institutions, so quality has been a major concern so far. India still lacks a proper funding base to channelize its resources. India's expenditure in term of GDP both on R & D and education is very low compared to most developing and developed economies. India's R & D initiative still faces major challenges. India still lacks proper collaboration to channelize its R & D which has a coherence relationship with patent. Lack of proper regulatory framework can cause a randomized and disintegrated environment that will automatically provide less or no incentives in term of encouragement and curiosity for research and innovation. The technology gap between education and industry could cause labor shortage necessary for high skilled scientific research which in turn the R & D will lose its capability to channelize its research, which is, why India still sees an insufficient resource base. India's R & D industry needs a strong collaboration with the west in order to exploit their high technology for better research outcomes. On the other hand, regulatory framework lacks policies for sound collaboration among industry, government and academic institution which focuses on disintegrated research and in collaborative benefits.

Research shows that there have been growth in innovation outputs in the Indian industry since the Independence but the growth is unequally distributed among the sectors. Most innovation outputs are restricted to pharmaceutical industries. Whereas automobiles, food, biotech, computer and electrical industries have been considerably ignored or not given due attention which has a lower contribution to GDP, employment and foreign exports as well. Considering the R & D tax incentives, pharmaceutical industry has been receiving a comparable bigger share In studying of technology wide patent grants, most patents were granted to chemicals, mechanicals and drugs, and other industries are given little importance and it is the coherence effect that most R & Ds have been done to the respective sectors where patent applications are comparably high.

Concluding the innovation since the post-independence India, India has achieved milestones but research still needs clarifications on certain policy. India's policy on tax incentives is centralized to few sectoral benefits that the innovation has been limited. Policy still needs to clarify why Indian

government is giving less important to electronics including computer sectors and communication equipment industries. Policy and data do not tell anything why the public expenditure on education remains comparable lower. Finally, how India is initiating policy measures for industry participation in R & D to exploit the resources effectively, perhaps, literatures also became silent on these issues.

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New Paradigm in Higher Education in India : Edupreneurship

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With liberalization in Indian economy, a large number of private enterprises in service sector including in education have come up. 15 to 20 fold growth in school level & higher level education (management & other technical education) in India during last 20 years is a sure sign of phenomenal increase in number of students enrolled in schools & professional colleges in India. This could be possible only through entrepreneurial zeal of socially- conscious individuals and groups. From around 100 Management Institutes / Departments of Management Education in Indian Universities in 1991-92, the number increased 10-fold to nearly 1000 management institutions in the country in 10 years' period i.e up to 2001-02. During next 10 years, the number has shot up to approx. 4,000 management institutes by 2011-12. This tremendous growth became possible due to Government facilitated liberalisation process through the entry of private entrepreneurs in technical education including management area. Today nearly 80 percentof such institutes are run by entrepreneurs in private sector.

Key words: Paradigm change, Edupreneurship, Higher Technical Education , Perception

Our country now stands on threshold of global market economy. Globalisation has a multi-dimensional impact on the system of education. It promotes new tools & techniques in this area like e-learning, flexible learning, Distance Education programmes and overseas training. Whether education can prepare citizens to face the new challenges will depend upon quality of management education which the system generates. In the fast pace of globalization, India has to develop its education system to respond to the challenges arising out of the rapid changing environmental factors including global competition to cater to the developmental needs competitively and strategically.

Various factors demand consideration for achieving overall high quality of education. A large part of our country's population today is young in late-teens or early-twenties. Its implications are that within next 5-10 years they would be entering job market. We need to create around 1.5 crore jobs per year in the next decade. This was stated by Dr. S. Ramadorai, Advisor to the Prime Minister in the National Council of Council on skill development, Govt. of India (Employment"Employment Newspaper", 4-10 May 2013). According to him 'job creation has to move closer to smaller towns and rural areas'This can be achieved only when quality education is available in various parts of the country.

Majority of graduates today are from generic disciplines in education. They are not capable of handling knowledge economy related work. Therefore improving quality of education is need the hour. Governmental efforts, though with good intentions, are not sufficient. It is a known fact that state of affairs in government schools and colleges is not something to be happy about. So there is something lacking in this set up. Can entry of private entrepreneurs in this domain fill this gap?

Other factor that merits consideration is that there shall be large increase in demand for graduates in India and abroad because of growth in Indian economy, increasing share of services and globalization of workforce. Hence need for large capacity expansion in Indian Higher education. Government has limited capacity to fund this expansion. So in country's interest it is required that edupreneurs are encouraged to set up good academic institutions in the country.

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Next issue that needs to be looked at is that current structure of granting approvals, wherein there are so many restrictions, very tough norms and the government is also not able to develop a conducive environment for encouraging entrepreneurs to venture in this domain. There is lack of appreciation at top level about the concept of viability, fee levels are controlled. Fees revision is negligible. Bureaucratic control is a big hindrance to growth of Edupreneurship of entrepreneurs in education.

There was a talk of policy framework for imparting quality education by government, wherein All India Council of Technical Education (AICTE)AICTE , ' University Grants Commission (UGC) and Distance Education Council (DEC) were to be merged to create an empowered council and possible policy changes under that empowered committee. But it seems that new initiative, lost its steam somewhere down the line. Still we have same rudimentary set up prevalent in this country.

Edupreneurship if really encouraged with full support can bring about world class schools and universities in this country, which will churn out well equipped graduates which can support the robust growth of Indian knowledge economy.

Changes required in Government's policy to encourage Edupreneurship

Education and its dissemination in this country are considered, at top level, a charitable activity or a not-for-profit activity. Objective behind that thought process is to provide education cheap to all sections of society. Though it is a good approach for social cause practically it is not possible to offer good education at low cost. One must differentiate which segments of education need to be provided at low cost and where competencies, Skills specialized Knowledge are needed entailing higher costs. Even if that means, providing same at a reasonable cost for the person desirous of seeking that kind of education. Of course ways and means can be found in terms of providing education loan or scholarships to such meritorious students who cannot afford.

Current education system exhibits a structure where there are a few players in this sector. Institutions have on one hand little competitive pressure to improve their output, while on the other, with cap on fees, there is little possibility to invest in quality improvements. This sector has large outflow of quality faculty to more green pastures resulting in reduction in educational standards, overall poor quality of service. This phenomenon is seen equally across both private and public sector institutions.

With a cap on fees and no-profit regime, large business houses have remained away from major investments in higher education and only ventured in a small way in philanthropic capacity. Education institutions, like any other service provider, operate best when they are well-funded, with a mix of public and private sector institutions and when there is consistency between resources and establishment of governance and management structures which have transparency and high degree of accountability for the outcomes.

Hue and cry over slower growth, public disenchantment, development & expansion of telecommunication, active role of electronic and print media in highlighting failure, success stories of private sector including engineering, management & I.T. colleges in forward- looking states like Karnataka, Andhra Pradesh, Maharashtra led to review of recent policy decisions and performance. As a result the new decade (2001 11) witnessed gradual loosening of controls, easier approvals of entrepreneurs' proposals and projects as road to faster growth of economy became wider and hassle free. It is during this decade that phenomenal growth and expansion of technical Colleges, private universities and huge increase in enrolment of students for this programme has taken place.

Possible Outcomes from 'Reforms and Change in Policy' & significant obstacles in the process:

- **Gearing the mindset for reforms:** Mindset change is the beginning of any reform. Reforming the higher education requires a more mature and national interest orientation on the part of all the stake holders, particularly the political and bureaucratic circles bureaucratic classes, who have erected barriers, that has been evidenced in recent years.

  First,policy makers still deny the fact that 'quality in education does not come cheap'. This is guiding the policy framework in Indian higher education. Education policy today aims to provide highest quality education at absurdly low prices. The political system derives strong mileage by maintaining a low fee structure, even at the cost of quality.

Second, catalysts of education faculty and management (politicians, educational bureaucracies, faculty and management) essentially pursue their own interests often conflicting without much accountability or transparency and a majority of institutes and universities remain vulnerable to political opportunism. The political will to reform the educational system has been lethargic, partly due to indifference and partly for other interests.

There is today a wide gap between the political agenda of the major parties and requirements of the economy and society. On the one hand there is the social and political agenda of keeping fees low, running education as a public good, largely administered by the government, based on norms of social equality and organized as a not-for-profit activity and most important of seeking power and patronage through control on education. On the other hand there are the economic considerations of meritocracy, emphasis on quality, inducing large scale, world class investments to lead the Indian knowledge economy.

- **Rebalancing the Public-Private Mix:** The NKC (National Knowledge Commission) has suggested that following areas merit serious consideration in this regard:

  First: Greater involvement of the private sector and the non-profit sectors in economically efficient and socially rational manner. Though high quality public sector educational institutes are absolutely essential for the country, the need to educate 500 million individuals is simply too large to be met by the public sector alone.

  Till recently 43% of institutions and 30% of enrolments were in the private sector. As a result of changes 88% of engineering colleges, 46% of medical colleges and 90% of business schools set up over the past 20 years are privately managed and it is the outcome of change in Policy of Education at the Centre and in the states. (CRISIL 2007)

  Second: There is significant merit in experimenting with liberalizing the regulatory structure to ease entry barriers, improve governance, deregulate faculty pay, tuition fees and remove restrictions on profits in higher education to promote a world class and economically viable private sector. The public sector institutions, both existing and proposed, will provide the necessary competition to private sector to ensure that higher education sector remains socially rational.

  Third area to consider is to experiment with setting up of fullfledged universities in India, established and administered along professional lines in both the private and public sector. These universities will involve all major disciplines, including professional schools, at all levels of education, ranging from undergraduate to PhD levels.

  Fourth: Today's knowledge explosion has made excessively narrow specialization without multi-disciplinary exposure outdated. India must transition to producing graduates trained to solve today's complex business problems applying cross disciplinary expertise. This need has been amply expressed by business through the premiums commanded by management graduates, with multi disciplinary education, over others. Full fledged universities by offering multi disciplinary education options can further sharpen the skills of the Indian graduates. A good role model of a comprehensive university is State-owned University of California at Berkeley (UC) . Its programmes encompass a whole range from undergraduate education to sophisticated post graduate offerings and state of the art research centre.

  Fifth: Globally reputed universities such as Stanford University, Georgia Tech, Oxford , Cambridge and University of Yale have made preliminary visits to this country for setting up campuses, but are deterred by the regulatory structure and need for approvals at various stages from the UGC and AICTE. It is time for India to help begin to establish full fledged universities with much greater room for flexibility for both state and private universities. Regulatory and bureaucratic hurdles to more meaningful public private partnerships, involvement of not-for-profit sector and of quality foreign universities should also be removed.

  In order to ascertain by collecting primary data whether the educationists also agree with the findings and suggestions of NKC or not a survey was conducted by us and responses of educationists were obtained by getting

questionnaire filled about various issues of reforms.

The Research methodology used in this article involves both Primary & secondary inputs. For primary data, a qualitative analysis of the responses given by a sample of randomly chosen, highly qualified Management educationists was required. The medium chosen for this was Telephonic interview. In addition to that, some secondary data which was relevant to the above mentioned problem, was chosen from some published articles.

Research Methodology

The Research comprised of mostly secondary data source. However, for the verification and testing of the secondary data, primary data was collected from the telephonic interviews of 40 prominent educationists in the cities of Ajmer, Jodhpur & Jaipur.

Secondary data needs to be tested for accuracy, relevance at present & freedom from bias. The primary sources were chosen for this purpose and their views helped to form a unified knowledge base on understanding the practical situation of the present and forecasting the future.

This research is a qualitative one, whereby the opinion & attitude of the respondents was correlated with the secondary data available on the topic. Any contradictions were noted and improved.

Primary Objective: To understand role and contribution of entrepreneurship in (private) educational sector, in providing good quality of managers to the business world.

Sample Size : 40

Population : Infinite

Sampling Type : Multi stage sampling & Convenience Sampling. Though consideration to different strata has been given due weightage.

Stratasused :

Table 1

Private	Public	Total	Category of Respondent
14	6	20	Entrepreneurs/ Promoters
7	3	10	Principals/ HOD's
7	3	10	Managers/ Administrators
28	12	40	Total

Types of Management Institutes chosen :

(1) Management Departments of Public sector Universities created by state governments and Central Government Public University Management Depts. Like Central University of Rajasthan, Delhi University, Punjab Technical University

(2) From Private Sector:

i. Private Universities' Management Departments Like Management Department of Amity University, Jaipur

ii. Stand Alone Management Institutes / colleges like Management & Commerce Institute of global Synergy, Ajmer

iii. Unapproved Management institutes like NIS Academy

Method Chosen: Telephonic Interview

ANALYSIS & INTERPRETATION

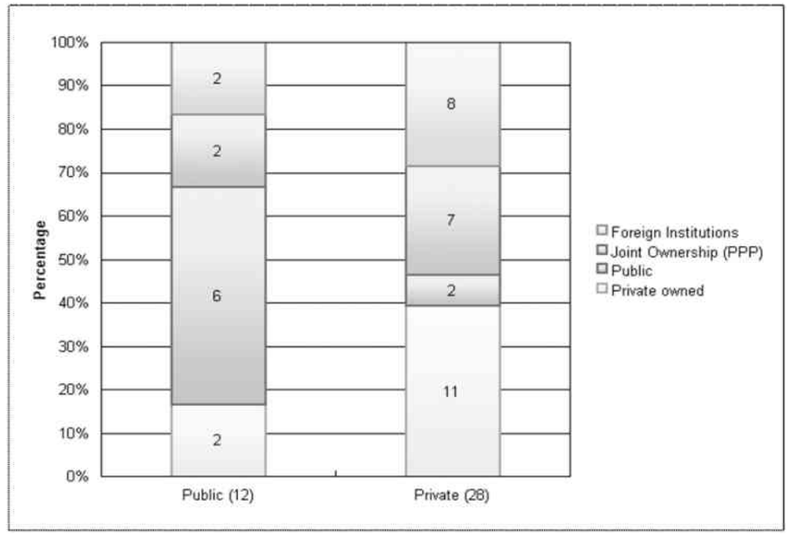
Analysis of questionsasked during the research as attached in Annexure I

1. Preference of type of Institute for quality Higher Education

Table 2

Total (40)	Private (28)	Public (12)	Options ▾ Category of Respondent ▾
13	11	2	Private owned
8	2	6	Public
9	7	2	Joint Ownership (PPP)
10	8	2	Foreign Institutions

Chart 1



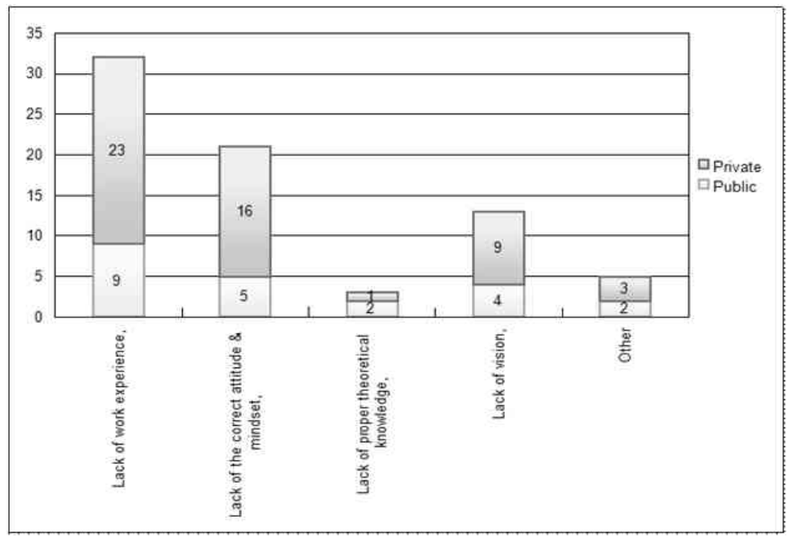
Interpretation: The private sector is regarded by most respondents, as the right hand of our college educational system. However, its worth noting that foreign institutions also have a scope, as some respondents expect higher quality of education from foreign institutions. Public sector personnel voted mostly for the public sector which suggests that the potential of public sector is more than what meets the eye.

2. Reasons for common Indian Graduate employability:

Table 3

Private (28)	Public (12)	Options ▾ Category of Respondent ▾
33	9	Lack of work experience,
16	5	Lack of the correct attitude &mindset,
1	2	Lack of proper theoretical knowledge,
9	4	Lack of vision,
3	2	Other

Chart 2



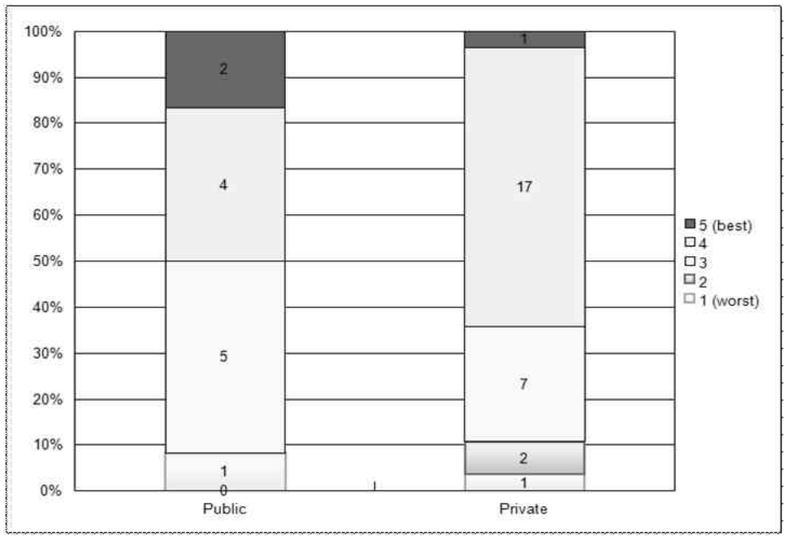
Interpretation: Ultimately, most people regard the lack of work experience as the primary cause of unemployability of graduates. Some of these respondents also agree on a certain degree of correlation between correct attitude/mindset and work experience, suggesting that the former arises from the latter only. A smaller number of respondents agree on "lack of vision". Apparently, lack of theoretical knowledge is not the reason that most graduates get rejected. Some respondents believe that the lack of additional achievements, lack of good leadership skills and lack of accurate knowledge of the current affairs may also lead to an unemployable candidate, especially in today's competitive world.

3. Analysis of quality of education in India

Table 4

Total (40)	Private (28)	Public (12)	Options ▾ Category of Respondent ▾
2	1	1	1 (worst)
2	2	0	2
12	7	5	3
21	17	4	4
3	1	2	5 (best)

Chart 3



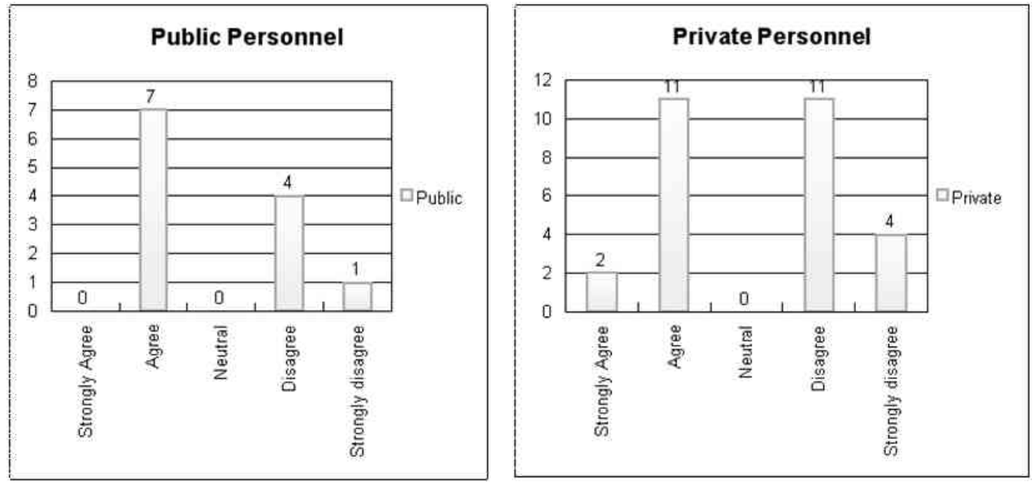
Interpretation: If asked to rate a particular aspect in a question, its most likely to be answered in a diplomatic manner (read it as: biased manner), affected by reluctance towards negative replies, feeling of patriotism, etc. From these figures, most ratings seem concentrated around 3-4 out of 5 points. Accounting for diplomacy bias, the actual opinion could be below these ratings. Indian education is regarded as average by most of the respondents.

4. Analysis of whether an existing Entrepreneur can train an aspiring Entrepreneur effectively.

Table 5

Total (40)	Private (28)	Public (12)	Options ▾ Category of Respondent ▾
2	2	0	Strongly Agree
18	11	7	Agree
0	0	0	Neutral
15	11	4	Disagree
5	4	1	Strongly disagree

Chart 4



Interpretation: Most respondents seem to agree with the question statement. Not many could agree strongly though. And also, on the contrary, a considerable number of respondents disagreed with the statement. Some respondents believe that being successful and mentoring others are two different things. Mentoring or teaching is a skill. Efficient performers are not necessarily good mentors or teachers.

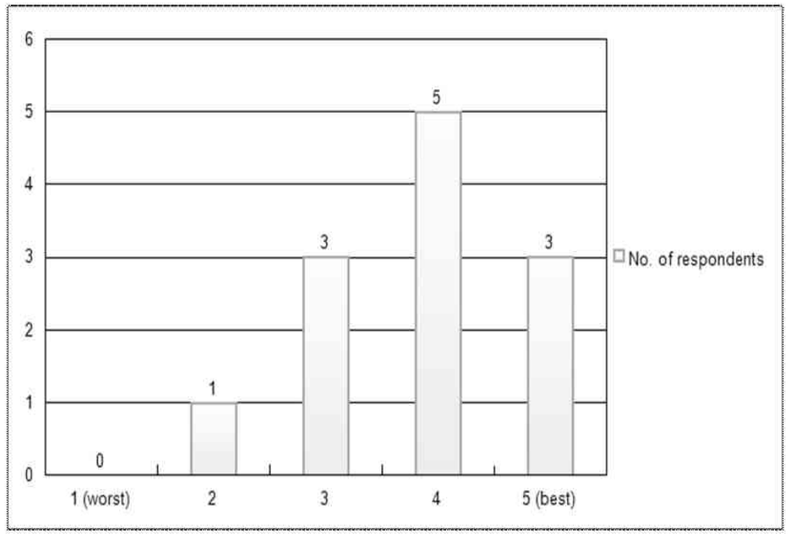
Analysis of Category 1 Questions related with only "Public Sector Personnel".

5. Analysis of quality of education in Private sector:

Table 6

No. of respondents (12)	Options ▾
0	1 (worst)
1	2
3	3
5	4
3	5 (best)

Chart 5



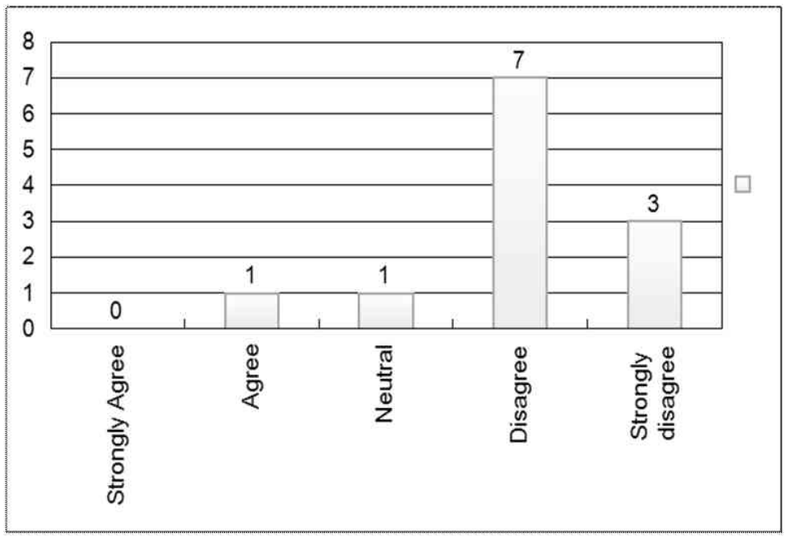
Interpretation: A lot of variations in the answers of the respondents, but 11 out of 12 agree that Private sector educational establishments are at least average or above it. And 25% of them opine that the education provided by the private sector establishments is unparalleled. According to some respondents, private sector equals better control. This result speaks volumes about the perception of private sector in the minds of respondents. Maybe, the claims of world class exposure, superior teaching methods, practical trainings and sky high placement packages seem to have left an impression on all.

6. Influence of Private sector on the growth of education:

Table 7

No. of respondents (12)	Options
0	Strongly Agree
1	Agree
1	Neutral
7	Disagree
3	Strongly disagree

Chart 6



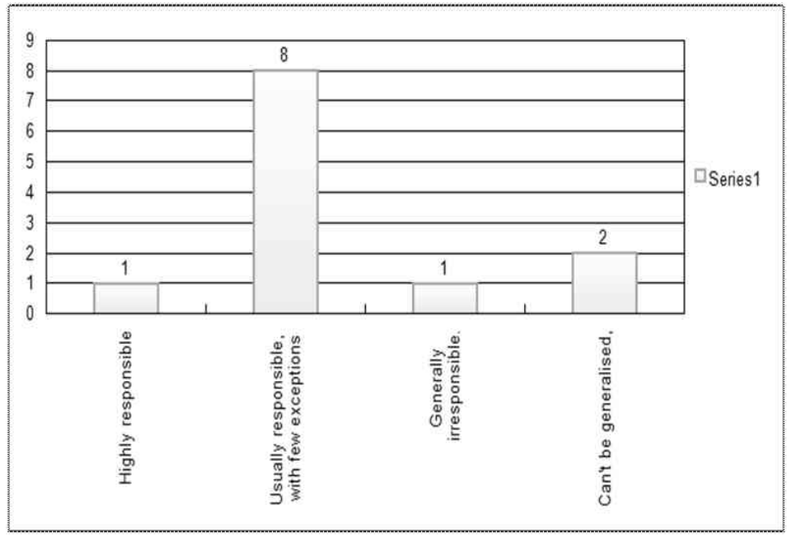
Interpretation: No double opinion here. Public sector managers/ educationists believe that private sector by itself can't carry the burden of professional education, at least not yet. Situation might change in the future. But today, the socialistic setup of our country will not be the same on complete privatisation of education. Private sector's investment is largely dependent on the economic benefits of the activity. Hence, its not advisable to rely on private sector alone, according to respondents.

7. Analysis of Sense of Responsibility Public sector towards towards education:

Table 8

No. of respondents (12)	Options
1	Highly responsible
8	Usually responsible, with few exceptions
1	Generally irresponsible.
2	Can't be generalised,

Chart 7



Interpretation: Respondents from the public sector consider the public sector usually accountable enough, with few exceptions. A fair share also believes that people are people, and they are more or less the same, whether public or private sector and hence, such statements can't be generalised for a particular sector.

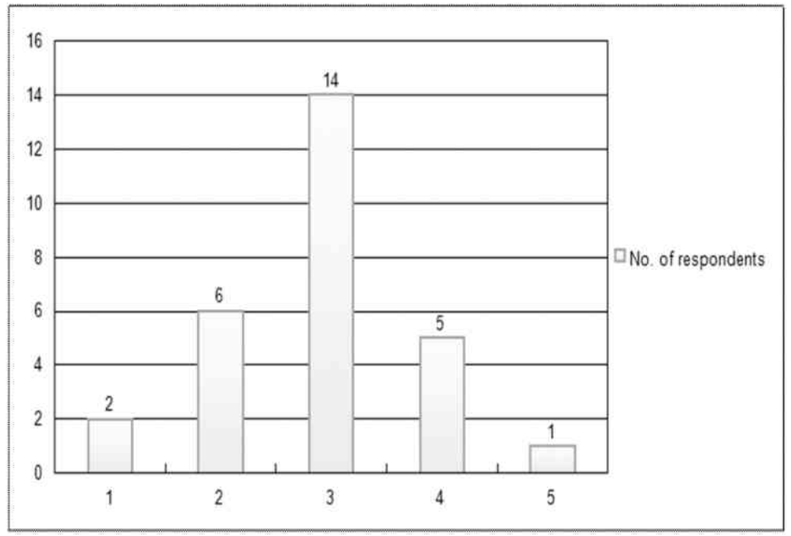
Analysis of questions related with Category 2 "Private Sector Personnel".

Q5. analysis of the quality of education in the Public Sector

Table 9

No. of respondents (28)	Options
2	1
6	2
14	3
5	4
1	5

Chart 8



Interpretation: Half of the Respondents from private sector have an average opinion about the public sector. Among the rest, most have given a 2 or 4, out of 5. It suggests that a lot of personnel from the private sector don't have very high expectations from the public sector establishments, in terms of quality of education.

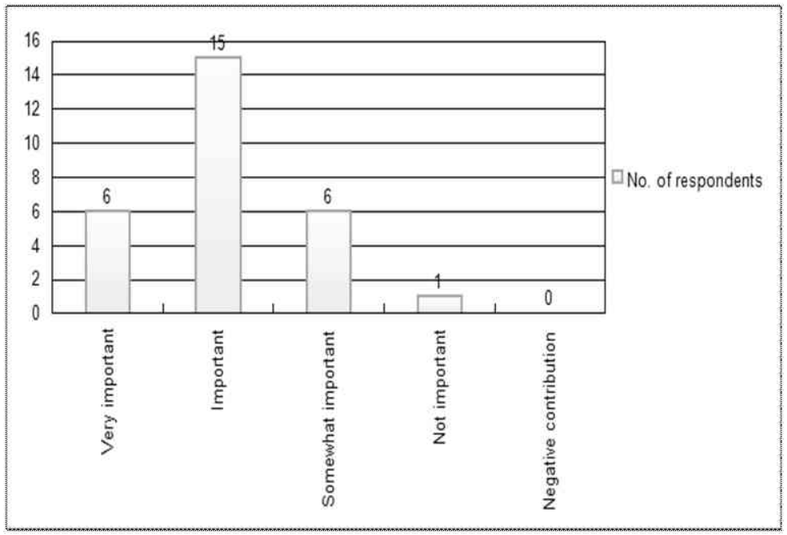
Q6. abnalysis of impact of the public sector educational establishments for the growth of the educational sector as a whole

A. Very Important
B. Important
C. Somewhat important
D. Not important
E. Negative contribution

Table 10

No. of respondents (28)	Options ▾
6	Very important
15	Important
6	Somewhat important
1	Not important
0	Negative contribution

Chart 9



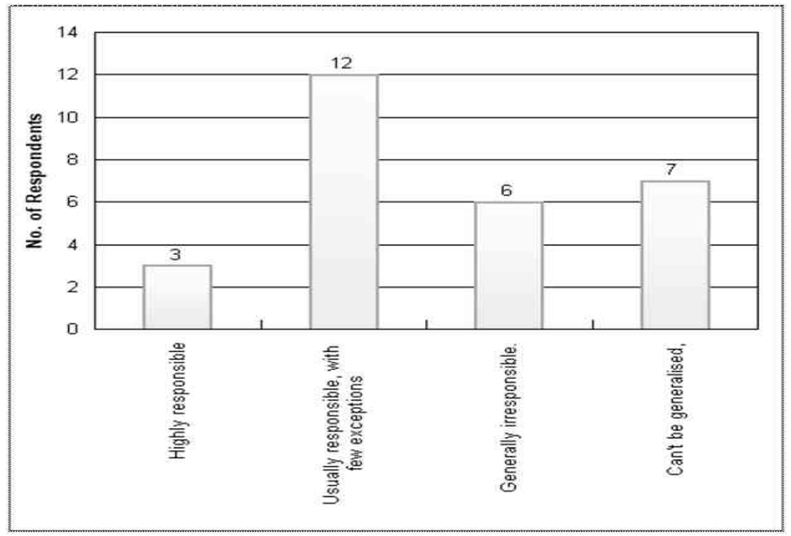
Interpretation: Most of the respondents consider public sector to be very important for the growth of the educational sector. This suggests that how important public sector is, in the field of education.

Q7. Analysis of accountablility & responsiblilityof the private sector educational establishments towards the needs of the economy

Table 11

No. of respondents (28)	Options ▾
3	Highly responsible
12	Usually responsible, with few exceptions
6	Generally irresponsible.
7	Can't be generalised,

Chart 10



Interpretation: Most of the respondents admit that private sector displays a reasonable level of accountability towards the economy, society and its educational needs. Private sector is profit oriented. One respondent gave an example of a popular Telecom company's educational venture, which has hardly any rural braches in India. Obviously, because the profit is in cities.

Findings & Conclusions

The research was conducted in such a manner that each sector's personnel were given an opportunity to speak about their own and the other sector as well. The results of the research are as follows:

- The private sector is one of the most important parts of our educational system. Higher quality of education is expected from foreign institutions as they bring in fresh thinking, good teaching methods, etc. However, both of these cannot be blindly relied upon, if the high performance of the educational sector at national level is the aim.
- The lack of work experience is the primary cause of unemployability of graduates. Work experience puts a person in the right mindset, some respondents believe. Most graduates receive the theoretical knowledge well, but the practical work experience is where they mostly lack. This suggests that there should be a longer training duration, with more strict measures to comply with, in order to successfully complete the graduation. The common studen need to be told that organisations hire persons, not degrees. Similarly, they expect the person to stand tall on certain qualities & attributes, which preferably must be inculcated Not even 10% of respondents gave 5 out of 5 to the quality of education in India. Indian education is at the best, perceived as average compared to education in other countries. Either the education quality needs to improve, or its perception needs to improve. And going by the secondary data we have, its most certainly the quality of education that needs to improve more.
- Not every successful professional can be a successful teacher or mentor. However, the best scenario would be that, if a good teacher or mentor is also a successful professional.
- Private sector is more or less, up there in terms of quality of education, compared to other sectors. Some respondents added that private sector offers better administrative control. However, private sector is better suited as a part of the educational pie chart, and not the heart itself. Private Sector alone can't manage the entire burden of educational needs of a society.
- Mostly, the public sector educational establishments are accountable for the country's economic needs, if few exceptions are ignored. The public sector stands up in areas where the Service Potential: Profit Potential is high. Obviously, education is not always a profitable activity.
- Quality of education in public sector apparently is not too sound. This is a factor which perfectly correlates with the statement given by few respondents regarding lack of control in public sector.

- For the overall growth of the country, public sector is very important. Its pervasiveness, economic advantage, etc. are the main reasons.
- Private sector is appreciated for its result oriented approach and better control & implementation of plans and policies. This ensures better utilisation of .resources. On the other hand, private sector is often perceived as the center of innovation and creativity.
- Private and Public Sectors are like hands to the same body, both are needed to function well. Private sector may be considered the right hand though. Edupreneurship is definitely an important step, but it would be wrong to overestimate it as the medicine of all ills. The curriculum can be made more practical, but it would be wrong to go with private alone, or to rely on entrepreneurs to mentor students.

Major findings: Analysis reveals that (a) Edupreneurship is not the only solution to the woes of Education sector in India (b) Reforms and accountability in the Public sector Educational set-ups is equally important for a balanced and fast growth for this sector.

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A Study of Factors and Preferences towards Investment Decision for life Insurance Policy

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Human life is a most important asset and life insurance is important as it provides financial protection to a person and his family at the time of uncertain risks or damage. Life insurance provides both safety and protection to individuals and also encourages savings among people. Life Insurance Corporation of India plays a vital role in the welfare of human well-being by providing insurance to millions of people against life risks such as uncertain death or accident.

The present exploratory and descriptive based study was selected with an objective to identify those factors which influence customers policy buying decision and also to analyze the preferences of customers while life policy investment decision-making. The data for the study has been collected from primary sources. The study area is limited to National Capital Region and sample size is 100 policyholders of LIC and different private life insurers have been selected through purposive sampling method. Researcher has taken hypothesis based on factors like advertisement, services provided by the company, tax benefits and reference groups tested with the help of statistical tools like chi-square test.

LIC is the most accepted and popular brand in life insurance in India. It occupies important position in the financial sector of an economy. In a period of half a century, the insurance sector has come in a full circle from being an open competitive market to compete nationalization and then back to liberalized market.

This paper concludes with that demographic factors of the people play a major and pivotal role in deciding the purchase of life insurance policies.

Key words: LIC Policies, Chi Square Test, Insurance industry, India

Introduction

Insurance Industry

India has a vast population of 125 crores and Insurance companies have a high potential of business. The Indian Insurance Industry has undergone transformational changes since 2000 when the industry was liberalized.

There have also been a number of products & operational innovations necessitated by consumer need and increased competition among the players, changes in the regulatory environment also had a path breaking impact on development of the industry. There was exponential growth in the first decade of insurance industry liberalization. Backed by innovative products & aggressive expansion of distribution, the Life Insurance corporation grew at very high speed. However this frenzied growth also brought in its wake issues related to product design, market conducts complaints of management & necessity to make course correction for long term health of the industry.

Regulatory changes were introduced during the past years and Life Insurance Corporation adopted many new customer centric practices in this period. Product related changes first in ULIP in Sep, 2011 & now in traditional products will have big impact on the industry.

Life Insurance Corporation is a big saving vehicle along with Banking in such uncertain economic environment and so we expect the industry to fare reasonably well. Demographic factors such as growing middle class, young insurable population & growing awareness of t for protection & retirement planning will also support the growth of Life Insurance of India.

Profile of Life Insurance Corporation

Life Insurance Corporation is an Indian state owned insurance group & investment company. Its Headquarter is in Mumbai. It is the largest insurance company in India with an estimated asset value of Rs. 1560481.84 crore (US $ 260 billion) as of 2013 it

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had total life fund of Rs. 1433103.14 crore with total value of policies sold of 367.82 lakh that year.

The corporation which started its business with around 300 offices, 5.7 million policies & a corpus of INR 45.9 crores (US $ 92 million) had grown to 25,000 services around 350 million policies and a corpus of over Rs 80,0000 crore (US $ 130 million) by the end of 20th century.

- From its creation, the Life Insurance Corporation of India which commanded a monopoly of soliciting and selling life insurance in India, created huge surpluses and by 2006 was contributing around 7% of GDP.
- In August 2000, the Indian government embarked on a program to liberalise the insurance sector and opened it up for private sector.
- In 2003, the first year premium compound annual growth rate was 24.53% while total life premium CAGR was 19.28% matching the growth of life insurance industry and also out performing general economic growth.
- Today, the LIC has 8 zonal offices, 109 divisional offices, 2048 branches, 992 satellite and corporate offices, 54 customer zones and 25 metro area services hubs located in India.
- The Economic Times brand equity survey 2012 rated LIC as no. 6 most trusted service brand of India.

Major competitors in the Insurance Sector in India

1. HDFC Standard Insurance Company Ltd.
2. Royal Sundaram alliance Insurance Company Ltd.
3. Reliance General Insurance Company Ltd.
4. Max New York Life Insurance Company Ltd.
5. ICICI Prudential Life Insurance Company Ltd.
6. IFFCO Tokyo General Insurance Co. Ltd.
7. Kotak Mahindra Old Mutual Life Insurance Ltd.
8. TATA AIG General Insurance Co. Ltd. IJPSS Volume 2, Issue 6 ISSN: 224
9. Birla Sun Life Insurance Co. Ltd.
10. TATA AIG Life Insurance Co. Ltd.
11. SBI Life Insurance Co. Ltd.
12. Bajaj Allianz General Insurance Co.Ltd.
13. ING Vysya Life Insurance Co. Pvt. Ltd.
14. ICICI Lombard General Insurance Co.Ltd.
15. Bajaj Allianz life Insurance Co.Ltd.
16. Metlife India Insurance Co.Ltd.
17. AMP Sanmar Life Insurance Co. Ltd.
18. Aviva Life Insurance Co. India Pvt. Ltd.
19. Cholamandalam General Insurance Co. Ltd.
20. Export Credit Guarantee Corp. Ltd.
21. HDFC-Chubb General Insurance Co. Ltd.
22. Sahara India Insurance Co. Ltd.
23. Shriram Life Insurance Co. Ltd.

In Life Insurance policies, the Investment Risk in Investment Portfolio is borne by the holders; the following are the key benefits under this plan:

1. Flexibility to choose the policy term
2. Flexibility to choose premium paying mode as per your convenience
3. Flexibility to choose from 2 fund types to suit your investment needs
4. Flexibility of partial withdrawals to meet your emergency needs

Benefits

1. Death Benefits

On death during policy terms, when the cover is in full force, Immediate lump sum payment equal to sum assured shall be paid to the nominee.

An amount equal to sum of all future premium payable after the date of death shall be credit to the policy holder's fund.

2. Maturity Benefits

On life assured surviving the date of maturity, an amount equal to policyholder's fund value shall be payable.

Review of Literature

Athma and Kumar (2007) in their empirical based study conducted on 200-sample size comprising of both rural and urban market analyzed the various product and non-product related factors and their impact on life insurance purchase decision-making. Based on the survey analysis; urban market is more influenced with product based factors like risk coverage, tax benefits, return etc. Whereas rural population is influenced with non-product related factors such as: credibility of agent, company's reputation, trust, customer services. Company goodwill and money back guarantee attracts many people for life insurance. Govind (2009) found that insurance company required to provide efficient services just can generate the confidence of customer toward company, however, allow customers to an undue delay is an important reason to lose the confidence by the insured in the talks by the insurer or his representative. Praveen, Gaurave, and Vijay (2009) found that ease of procedures is a contributing factor towards the study. This factor includes various variable statements which are co-operative and friendly agent, settlement of claims easy and timely, the company provides claims on time, and agent is well informed about policies. Zeithmal (1981) state that some of the major determinants of brand loyalty for products and services are accessibility of substitutes, recognized risk related with a purchased, the cost of exchanging brands, and the previously satisfaction with a brand. Nelson (1970) distinguished between two characteristics of products: search qualities, attributes which are very tangible and can be evaluated by examination prior to purchase; and experience qualities, attributes which can only be evaluated during or after consumption.

Objectives of the study

- To know the customer influencing factors on purchase decision in insurance product.
- To analyze the influence of various factors like advertisement, services, tax benefit, reference group purchase decision.

Effect of Branding in the Purchase of Life Insurance Products

A Brand is the key aspects of purchasing the product or invest the money. Brands are important to consumers as they provide them with choice, a means of simplifying the decision, Quality Assurance, Risk avoidance, & Self experience. A brand & Brand loyalty is an important parameter, key element of decision making of investment. The brand loyalty affects more on decision of the investor. In Insurance Business, people are more loyal towards Life Insurance Corporation.

Service Factors

An Insurance is a service industry, the main focus is on the efficient and effective delivery of services to the policy holders. The other service factor is security of the amount insured and customer satisfaction. The most important service factor is the Quality Service. It is the only differentiating factor to attain sustainable growth in competitive environment.

Behavioural Factors

Consumer behavior is defined as observable activities chosen to maximum satisfaction through the attainment of services. LIC can be considered as a product in terms of various types of policies bought. The power of marketing and ability of marketing research and consumer analysis to gain insight into consumer behavior should not be misused.

Loyalty

Customer loyalty depends on satisfaction of his multiple needs. They know them only when they are told about those needs. The Life Insurance Corporation of India has devised several life policies to satisfy these diversified needs of the customers.

Research design

The study was exploratory in nature and aimed at exploring the factors and survey method was used to complete the study. The data was collected through personal contacts, the sample frame were individuals invested in LIC policies. Purposive sampling technique was used to select the sample and there were 100 respondents out of which 60 males and 40 females, age group between 20 to 65.

Questionnaire was self designed for the evaluation of factors affecting consumer's perception towards life insurance products.

Data collection

To study the Brand loyalty of LIC of India Data collected through primary sources i.e questionnaire. Questionnaire is prepared The questionnaires includes open and closed ended questions viz. individual profile, company preferences, choices, determinants etc. also likert attitude scale of measurement has been used to measure the customer preferences. The questionnaire is then executed on samples. The sample consists of 100 individuals of NCR region.

Sampling Technique

Non Probability sampling involves the selection of units base on factors other than random chance. It is also known as purposive sampling.

Convenience Sampling

The samples for this research study are insurable people in general public. The sample was selected based on their easy availability. This research study forms a basis for conducting a detailed research that generates ideas and hypothesis.

Sampling Area

The research was conducted in NCR. Conducting this study in NCR would be more effective to Life Insurance Corporation.

Sample Size

For the purpose of study, 100 samples were taken.

Influencing factors in Purchase decision

Table 1

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Advertisement	12	40	28	14	6
Services provided by company	28	48	16	8	0
Tax Benefit	32	46	22	0	0
Return & Death Benefit	36	52	8	0	4
Reference Groups	14	48	24	10	4

Factors having indirect impact over decision making of the Life Insurance policyholders have been listed below:

Table 2

Factors		Respondents	Percentage
Preference of Insurance Plan	Endowment	60	60
	ULIP's	14	14
	Pension Plan	10	10
	Children's Plan	16	16
Motivating Product related factor	Expected returns of policy	28	28
	Range of coverage offered by policy	40	40
	Brand Name	16	16
	Needs to satisfy my changing needs	16	16
Prefered Risk option	Low Risk & Low returns	56	56
	High Risk & High returns	20	20
	Medium Risk & Medium returns	24	24
Investment preferences	Long Term Investment	64	64
	Short Term Investment	36	36
Reasons for rejecting an insurance product	High Charges	26	26
	Low returns	30	30
	Longer premium paying term	32	32
	Cost of the product	12	12
Core benefits expected by customers	Death benefit	24	24
	Saving	52	52
	Tax Planning	18	18
	To serve for urgent needs	6	6
Major criteria in selecting insurance products	Annual income	18	18
	Family needs	46	46
	Returns & benefits from product	36	36
	As suggested by others	0	0

Chi Square Analysis

The analysis of various factors like advertisement, services provided, tax benefit, reference group have been considered in view of the objectives listed above. For this, the descriptive as well as inferential statistics have been applied for analysis. Firstly, Exploratory analysis and then Inferential analysis test as Chi square test has been applied. Chi square test is a non parametric test is used to determine if categorical data shows dependency or two classifications are independent. Chi square is applicable in large number of problems. This test is, in fact, a technique to test the goodness of fit, test the significance of association between two attributes & test the significance of population variance.

$$\chi^2 = ? \ (O - E)^2 / E$$

where O – Observed frequency,
E- Expected frequency

Expected Frequency = (Row Total * Column Total) / Total Population

Null hypothesis (H_0): Let us take null hypothesis that the factors like Advertisement, Returns & Tax benefits, Reference group do not influence the purchase decision.

Various Factor Influencing Purchase Decision

Table 3 Observed Frequency Table

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Row Total
Advertisement	12	40	28	14	6	**100**
Services provided by company	28	48	16	8	0	**100**
Tax Benefit	32	46	22	0	0	**100**
Return & Death Benefit	36	52	8	0	4	**100**
Reference Groups	**14**	**48**	**24**	**10**	**4**	**100**

Table 4 (Expected Frequency Table)
Expected Frequency = Row Total * Column Total / Total Population

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Advertisement	24.4	46.8	19.6	6.4	2.8
Services provided by company	24.4	46.8	19.6	6.4	2.8
Tax Benefit	24.4	46.8	19.6	6.4	2.8
Return & Death Benefit	24.4	46.8	19.6	6.4	2.8
Reference Groups	24.4	46.8	19.6	6.4	2.8
Total	122	234	98	32	14

Observed Frequency	Expected Frequency	O-E	$(O-E)^2$	$(O-E)^2/E$
12	24.4	-12.4	153.76	6.30163934
40	46.8	-6.8	46.24	0.98803419
28	19.6	8.4	70.56	3.6
14	6.4	7.6	57.76	9.025
6	2.8	3.2	10.24	3.65714286
28	24.4	3.6	12.96	0.53114754
48	46.8	1.2	1.44	0.03076923
16	19.6	-3.6	12.96	0.66122449
8	6.4	1.6	2.56	0.4
0	2.8	-2.8	7.84	2.8
32	24.4	7.6	57.76	2.36721311

Observed Frequency	Expected Frequency	O-E	$(O-E)^2$	$(O-E)^2/E$
46	46.8	-0.8	0.64	0.01367521
22	19.6	2.4	5.76	0.29387755
0	6.4	-6.4	40.96	6.4
0	2.8	-2.8	7.84	2.8
36	24.4	11.6	134.56	5.5147541
52	46.8	5.2	27.04	0.57777778
8	19.6	-11.6	134.56	6.86530612
0	6.4	-6.4	40.96	6.4
4	2.8	1.2	1.44	0.51428571
14	24.4	-10.4	108.16	4.43278689
48	46.8	1.2	1.44	0.03076923
24	19.6	14.4	207.36	10.5795918
10	6.4	3.6	12.96	2.025
4	2.8	1.2	1.44	0.51428571
			Total	**77.3242809**

Calculated chi square = 77.3242809

Tabulated value = 26.3 at 5% level of significance at 16 degree of freedom

Calculated Chi square > Tabulated Chi square

Null hypothesis rejected,

Alternative Hypothesis is accepted.

The various factors like, advertisement, Returns & Tax benefits, Reference groups influence the purchase decision.

Findings

1. With regard to gender, 60% are males and 40% are females belong to age group between 20 to 65.
2. With regard to occupation, 70% are service people and 30% are business people.
3. With regard to preference, 60% prefer Endowment policy, 14% prefer ULIP plan, 10% prefer Pension plan and 16% prefer children's plan.
4. With regard to Investment, 64% people preferred Long-term investment and 36% preferred short-term investment.
5. With regard to preferred risk option, 56% people are interested in low risk & low returns, 20% people are interested in high risk & high returns and 24% preferred medium risk & medium returns option.
6. With regard to preference 64% policyholders believe in public sector and 36% believe in private sector.
7. With regard to selecting insurance product, 46% people think that there is a family needs, 36% returns & other benefits from products, 18% annual income.
8. Out of 100 respondents, 70% people are insured and 30% are not insured.

Limitations

Following limitations may be traced in the present study.

1. Sample size may not be too flexible for large population of the country.
2. This research is only for National Capital Region.
3. Human resource is limited.
4. Generally people are not ready to share views.

Implications of the study

1. Life Insurance Corporation Managers should design various schemes for different segments for customers. They should introduce flexible pricing plans for families, corporate, individuals, children, business professionals etc.
2. Government should make plan to introduce foreign investment in Life Insurance Corporation to improve the Indian economy.

Conclusion

During the research, LIC has been successfully able to create value for its policyholders. LIC is a dominant market player with more than 70% of market. It is heartening to note that Life Insurance Corporation is doing good service and the customers are happy about the various services rendered by this company in NCR region. There is a good bond between Insurance services and the customers which is reflected in the analysis. During the study it is found that policyholders prefer insurance sector public & Private both. They prefer private insurance sectors because they provide them the banking facility and a lot of value added services. So it will be beneficial both to the private and to the LIC if it offers banking facility to the policyholders. Brand image and service is the major contributor to influence the prospects mind. Advertisements and other communication methods have to be very much effective in making the brand name of LIC a popular in the minds of people.

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Brand Awareness of Diagnostics Labs amongst Patients of Delhi / NCR Region

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In Today's global market, brand awareness plays a crucial in winning orders and in turn gaining sales numbers. A brand that has some level of brand awareness is far more likely to be considered, and therefore chosen, than brands which the consumer is unaware of. Additionally, the strength of awareness of the brands within the consideration set can also be significant. Every organization invests in this aspect to attract majority of consumers by creating awareness. Brand Awareness remains fundamental to consumer as it is the interaction initiation point with the brand. In the present work, a study was carried out to identify the methods adopted presently for the brand awareness amongst the diagnostics centres of NCR. The main purpose of this study was to find out the importance of doing Brand Awareness amongst diagnostics labs where socio-and economic stratum of customer was identified through primary research. The statistical analysis of data is based on descriptive analysis and ANOVA. The results indicates a positive and significant relationship between the Brand Awareness and stimulus for seeking services, frequency of visits, modes of services, location, diagnostics centers selection., sample collection from home. The results further revealed that the major consumer expectation were quality, benefits and discount offerings.

Keywords: Brand Awareness, Diagnostics labs, Brand preference, Patients, Blood tests, IVD assays

Introduction

For centuries, companies have used branding to differentiate their goods from their competitors' goods. The word brand is derived from the Old Norse word brand which means “to burn”, as brands were and still are the means by which owners of a livestock population mark their animals to identify them. Aaker (1991) defines a brand as “a set of assets/liabilities linked to a brand's name/symbol that adds to the value provided by a product or service

Consumers' knowledge about a brand makes consumers respond differently to the marketing of the brand. The study of brand equity is increasingly popular as some marketing researchers have concluded that brands are one of the most valuable assets of the company. Branding only takes place when these perceptions are managed strategically to influence consumers' perceptions, attitudes or behaviour with the purpose to create commercial value by means of marketing communication.

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The modern concept of branding grew out of the consumer packaged goods industry and the process of branding has come to include much more than just creating a way to identify a product or company. Branding today is used to create emotional attachments to products and companies (Dolak, 2003; Kotler & Armstrong, 2004). Branding efforts create a feeling of involvement, a sense of higher quality, and an aura of intangible qualities that surround the brand name, mark, or symbol (Aaker, 1991;Dolak, 2003).

The most important assets of any business are intangible including its base of loyal customers, brands, symbols and slogans and the brand's underlying image, personality, identity, attitudes, familiarity, associations and name awareness. These assets along with patents, trademarks, and channel relationships comprise brand equity, and are a primary source of competitive advantage and future earnings (David Aaker, 1991; Neal& Strauss, 2008).

Brand equity is initially built by laying a foundation of brand awareness eventually forming positive brand images and is ultimately maximized by high levels of brand loyalty, which is illustrated in the following (Strategic Marketing and Research Techniques, 1992-2008): The importance of brand equity consists of numerous benefits for companies that own brands. Brand equity has positive

association with brand loyalty. More precisely, brand equity increases the probability of brandselection, leading to customer loyalty to a specific brand (Pitta & Katsanis, 1995).

Brand Awareness in Decision Making

In a situation where the consumer is aware of a number of brands which fit the relevant criteria, he or she is unlikely to put in much effort in seeking out information on unfamiliar brands. A brand that has some level of brand awareness is far more likely to be considered, and therefore chosen, than brands which the consumer is unaware of. Additionally, the strength of awareness of the brands within the consideration set can also be significant. Wilson (1981 cited in Woodside & Wilson 1985) confirmed the importance of top-of-mind awareness in a study which found that the higher the position of the brand in the consumer's mind measured by unaided recall, the higher the purchase intention and the higher the relative purchase of the brand. In another study, increases in brand awareness were shown to increase the probability of choice even without any accompanying change in attitude or perceptions.

Brand awareness enhances perceived quality : A further way brand awareness may affect choice within the consideration set is by influencing perceived quality. In a consumer choice study by Hoyer and Brown (1990) over 70% of consumers selected a known brand of peanut butter from among a choice of three, even though another brand was 'objectively' better quality (as determined by blind taste tests), and even though they had neither bought or used the brand before. This result is even more surprising considering the subjects were given the opportunity to taste all of the brands. Just being a known brand dramatically affected their evaluation of the brand. Intuitively, this makes sense: a consumer may rationalise that if they have heard of a brand, the company must be spending a fair sum on advertising. If it is spending a lot on advertising, then the company must be reasonably profitable which means that other consumers must be buying the product and they must be satisfied enough with its performance; therefore the product must be of reasonable quality. Stokes (1985) found that for a low involvement product (rice) familiarity had a greater magnitude of effect on the quality perception of a brand than either price or packaging. And further, that familiarity had a significant effect on purchase intention whereas price and package design did not.

Brand awareness benefits marketing : Brand awareness should be an important goal of the marketing communication efforts of a firm as it has a number of important functions. It is widely acknowledged that without creating brand awareness, brand attitude and brand image cannot be formed. However, equally important but less widely recognised is the importance of brand awareness as a heuristic approach which can affect inclusion in the consideration set and in many situations may be sufficient by itself to determine the choice from the consideration set. To the extent brand awareness can determine not only entry to the consideration set but can also determine which brand is chosen from the consideration set.However, there is difficulty in demonstrating the value of assets to the management. Aaker (1991a) complains the problem is that, firstly, enormous pressure exists for organisations and their brands to demonstrate short-term profit results. Brand managers are often given a one to three year time horizon and little incentive to make strategic brand building investments. And secondly, demonstrating the long-term value of brand building is "exceptionally difficult" (Hogarth 1980, Aaker 1991a). Even managers, who claim that they are concerned with the brand building activities of their firm, find difficulty in gaining support and resources for these activities.

In the light of Aaker's findings, a study by Kelly (1991) is very interesting. Kelly carried out a series of interviews with Australian marketing managers. Many of the managers he interviewed quoted that “Advertising was directed towards building the longer term effects of favourable brand image and strong brand loyalty”. Other managers recited that Brands don't wait for short-term results instead advertising provides them with an opportunity to incorporate branding and image building which is very much oriented towards the longer term benefit (Kelly 1991 p.5.). In other words, these managers claimed the long-term goals of brand-building and brand image is to be of greater interest to them rather than short-term objectives such as sales. However this research was based on discussion with managers, and might obviously suffer from managers saying what they felt they should do, rather than what they actually do, especially when talking to a marketing academic.

While studying the business world one can come to know that most of the business's objective is to enhance their sales as well as their profits. For this purpose organizations try to encourage people

towards its products and services for purchase and customer lifetime value means steam of purchases over the life time period. Brand awareness passes on that how to aware current and potential customers towards your product and service (Gustafson & Chabot, 2007). If an organization has a successful brand awareness it means that the products and services of the organization have a good repute in the market and simply acceptable (Gustafson & Chabot, 2007). The awareness of the brand plays a significant role while purchasing a product or service and may have control on perceived risk evaluation of consumers and their level of assurance about the buying decision due to awareness with the brand and its uniqueness.

There must be a consideration of brand while making a decision to purchase a product or service, if there is nothing to be considered the probability is that there is nothing to be chosen (Baker W, J, & Nedungadi, 1986). Brand awareness creates a great association in memory about a particular brand (Stokes, 1985). Creating a strong brand image in the consumer's mind depends on create an optimistic brand assessment, reachable brand approach, and a reliable brand representation (Farquhar, 1989). The importance of brand awareness in the mind of the customers can be evaluate at various stages e.g. recognition, recall, top of mind, brand dominance (they only call that particular brand), brand knowledge (what brand means to you) (Aaker D. , 1996). Brand awareness is very important because if there will be no brand awareness no communication and no transaction will be occur (Percy, 1987). Some of the consumers can make rule to purchase only those brand which are famous in the market (Keller, 1993).

Importance of brand awareness in brand choice : Taking Aaker's (1991) study on brand awareness enlightens this theory of brand equity's integral part that is brand awareness. As his studies had profoundly covered petite aspects of this topic to clarify its purpose of being there and why it has been so important and in fact gaining more insights by the organizations which are investing a lot in the brand share and its value which is caused from the initiation point of bringing awareness to the consumers about the brands in the market until its trial, adoption and re-purchase to the loyalty aspect which has been covered thoroughly.

Brand awareness and consumer/brand loyalty: Finally, brand awareness affects consumer loyalty and decision-making by influencing the formation and strength of brand associations in the brand image created through the different information attached to the brand in memory. In practice companies' use aided and unaided awareness, image and branding marketing research studies to determine the extent to which consumers are familiar and positive opinions about their products or services. Inmany industries, companies with the highest awareness levels also control the largest market share. Keeping in mind the importance accorded to the concept of "Brand Awareness" by various authors and practitioners, its research implications are well established (Market Research Worldwide, 2009).Awareness levels, measures whether consumers know about and are familiar with a company, organization, product, or service.

Unaided awareness is the degree to which consumers' think of a company or product on a top-of-mind basis. "When you think of companies that provide these categories of products, which first come to mind?" (Market Street Research, 2004). Aided awareness on the other hand is the degree to which consumers who know about a company or product are familiar with that company or product. For example a question asked could be, "How familiar are you with this product?""Would you say you are very familiar, somewhat familiar, or not familiar?" (Market Street Research,2004).

Focusing on the relevance of brand awareness that is related to the strength of the brand node or trace in memory, as reflected by consumers' ability to identify the brand under different conditions (Rossiter and Percy 1987). In other words, how well does the brand identities, serve their function.

In low involvement decision settings, a minimum level of brand awareness may be sufficient for product choice, even in the absence of a well-formed attitude (Betteman & Park 1980; Hoyer & Brown 1990; Park & Lessig, 1981). Using elaboration likelihood model (Petty & Cacioppo, 1986) suggest that consumers may base choices on brand awareness considerations when they have low involvement, which could result from either a lack of consumer motivation or lack of consumer ability. A brand with high awareness and with positively distinguishing associations will have a high added value for consumers (Riezebos, 2003). Doney and Cannon (1997), in his study found that, trust as the perceived credibility and goodwill of a target party. The first dimension focuses on the objective believability of an exchange partner, as in an expectancy that one can rely on the partner's word

or written statement. The second dimension is the extent to which one partner is genuinely interested in the other's welfare and motivation to seek joint gains. In the health care context, trust can create an exchange environment in which a hospital can provide better care to its patients, or customers, while becoming or remaining profitable. Built on management capability, trust is a standard that hospitals and their employees offer patients. When patients complain about service, the hospital and its employees must do their best to respond to the complaints and thereby maintain or rebuild trust.

Role of Brands in Diagnostic Labs

Diagnostic laboratory : The features of a diagnostic laboratory are as follows:

- Provide high quality range of laboratory test
- Provide services to surgeons, hospitals, general practitioners
- Used to diagnose diseases and preferably sub classify it regarding

Points to keep in mind to form a diagnostic lab

- Quality assessment
- Quality assurance
- Quality control

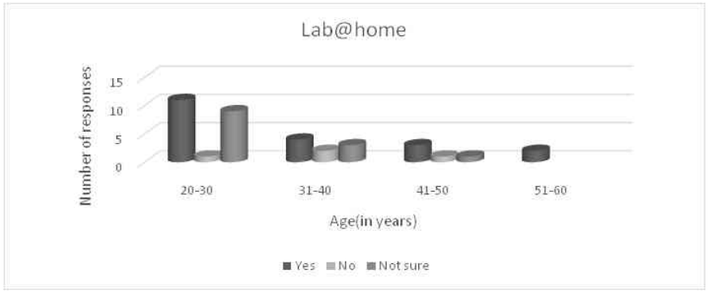
Analysis and Interpretation

People prefer going to their regular labs generally and then to the diagnostic centers referred to them by their doctors. Prescription is evidently the sole most criteria to go for any kind of diagnosis and very uncommonly people go for self-prescribed diagnosis.

As per the sample study ,it can may be infer that people still are not very aware of lab@home services and those who knows do not really trust them. Might be because of very less exposure or just pure antagonistic nature. People tend to oppose the change whatsoever.

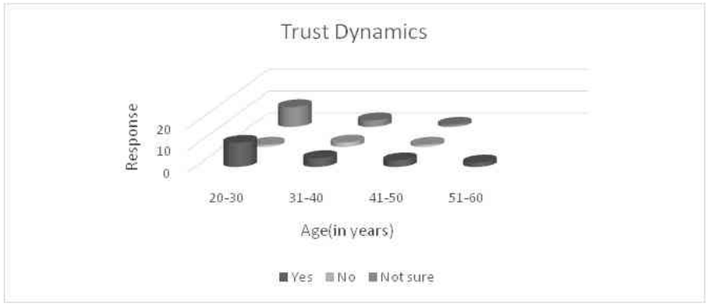
Age plays a major role in this selection procedure as well since the acceptance for/of anything new is more in youth. People of age group 20-30 are most aware of lab@home services and the awareness gradually decreases with increasing age, i.e. age is inversely proportional to the awareness.

Chart 1: Lab at home services awareness



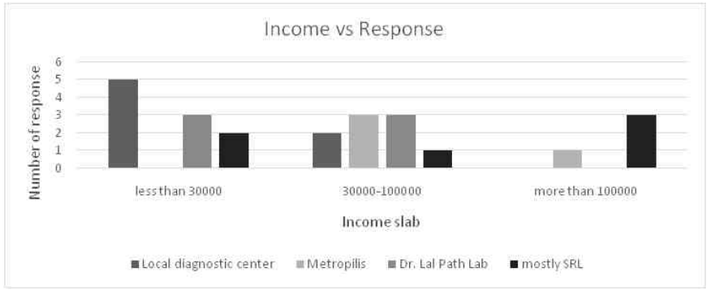
As the awareness similar pattern was observed in trust dynamics. Most acceptances of the services are in younger age group people than in elderly people.

Chart 2 : Response vs Age relationship



Respondent's choice varies greatly with their income. The respondents earning or having more family income greatly believes in quality thus the choice of diagnostic center is mostly SRL.

Chart 3: Income and response relationship



People are brand/name loyal, the diagnostic center they go to they refer it to others too and does considers it their family lab. Since, their trust and loyalty builds up on the particular name. More than accuracy or reports people tend to go for word of mouth, i.e., their doctors or sometimes friends and families advice.

Central Delhi : Most of the respondents do believe and choose the lab suggested by the doctors and as the Dr. Lal Path has been serving since many years it has a good hold in the market and thus reliable and convenient for the patients to easily choose from existing labs.

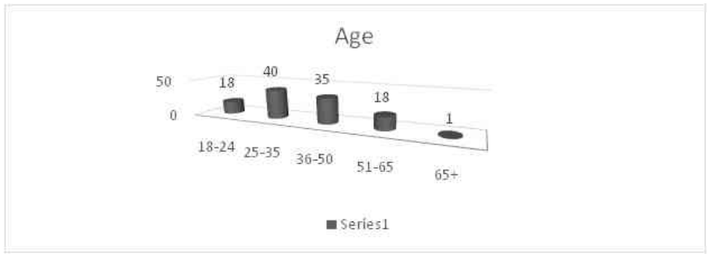
Table 2: Labs according to rank given on the basis of responses

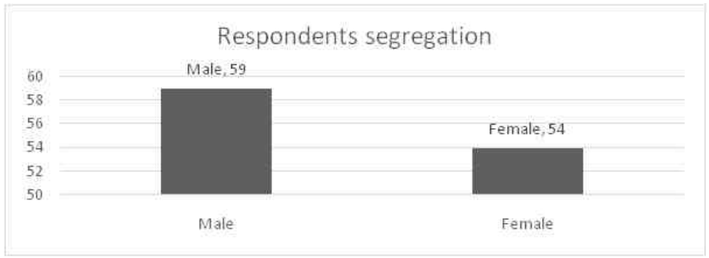
Lab	Rank
Dr. Lal Path	1
SRL	2
Metropolis	3
Other	4

"Lab at Home" is not known by many but yes when explained about the concept mostly young population were able to acknowledge the service. Price for the tests offered are really not an issue because when compared the tests prices they all stand more or less the same.

Noida: Respondents visit a diagnostic centre after every 3 months whether due to some illness or for other necessary checkups. The preference of choosing a diagnostic centre is as per the doctor's advice, also an opinion from friend/relative who already had an experience with a diagnostic centre. The parameter for selecting a diagnostic centre depends upon the doctor's advice or a concern from a family member or relatives. People are not well aware about the lab@home services. The only market leader being observed was Dr. Lal Path Labs. Respondent's segregation basis their age group was:

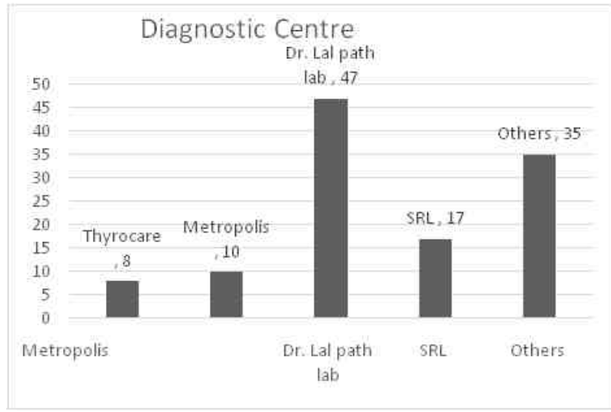
Chart 4 : Age segregation of respondents





Most preferred diagnostic centre in Delhi/NCR region is Dr. Lal path. The ranking as per the responses came out to be:

Chart 6: Diagnostic center preference



It was observed that doctor's prescription/suggestion plays the major decisive role in the selection of diagnostic centers services rendered and the need of services required.

Chart 9 Modes of Services Located

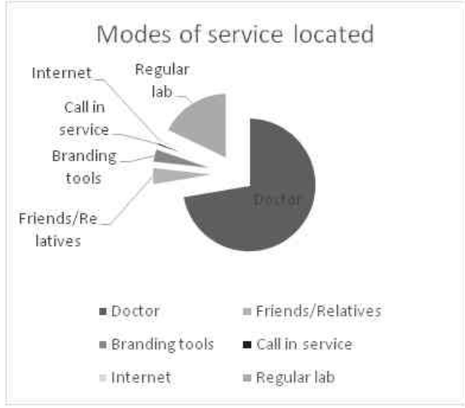
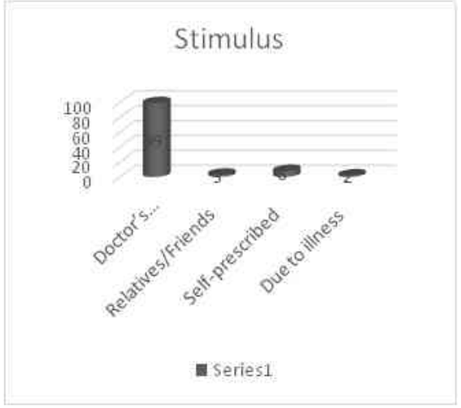
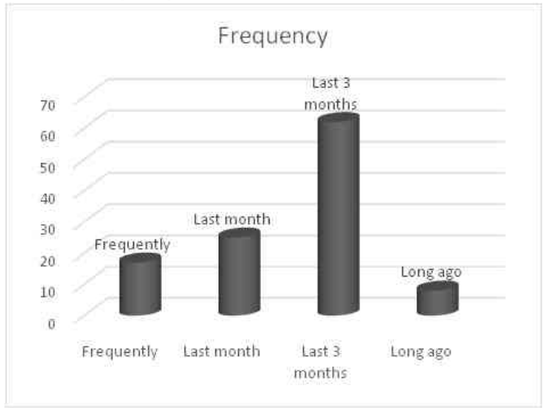


Chart 10: Stimulus for seeking services



Also, it was observed that there is a positive relationship between more frequent visitors and brand awareness levels.

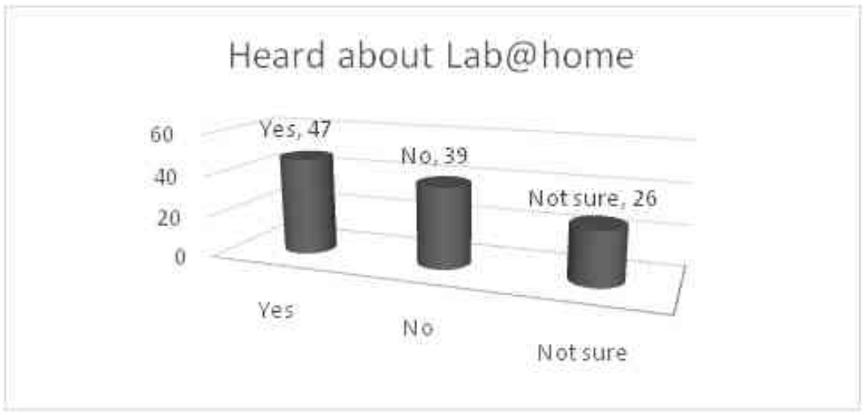
Chart 11: Frequency of visits



47% of the respondents give recommendation of the diagnostic centers they are most aware off.

Chart 12: Recommendations given to others

Majority of the respondents were aware of lab at home services, in which 23% were sceptic about their surety regarding the awareness or knowledge.



Results

In the following pages, the results of the questionnaire are shown. As can be seen in Table two items stand out. The item that was rated highest is 'Heard about Lab@home service' & 'Any lab recommendation you've given'. The average rating for these item are high, 37.33. Other items that really matter to patients when choosing a diagnostic centre are "Stimulus for Seeking Service"(28) & "Last Time Path Service Used" (28).

Another finding of the research is that some items turned out to be not important. "How is a service located" (18.67) are items that are not important for patients when choosing a diagnostic centre.

Minimum Standard Error depicts that the quantum of the fluctuations is decreasing. The maximum mean value shows there is association between specific factors and brand awareness. It displays these are the main factors which will affect the brand value of diagnostic centres.

Factors	Mean Score	Std. Deviation
Q.2 Stimulus for Seeking Service	28	47.4
Q.3 How is a service located	18.67	31.3
Q.1 Last Time Path Service Used	28	23.7
Q.6 First name of the lab that comes to mind	23.4	16.9
Q.8 Heard about Lab@home service	37.33	10.59
Q.12 Any lab recommendation you've given	37.33	13.31

Table 4

Factors	N	Mean	Standard Deviation	Standard Error	Minimum	Maximum
Stimulus	4	28	47.4	23.7	2	99
Modes of service located	6	18.67	31.34	12.79	1	81
Frequency	4	28	23.7	11.85	8	62
Which hospital	5	23.4	16.94	7.5	8	47
Heard about Lab@home	3	37.33	10.59	6.11	26	47
Recommendation	3	37.33	13.31	7.68	26	52

ANOVA

Factors					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1129.973	5	225.995	.285	.916
Within Groups	15069.867	19	793.151		
Total	16199.840	24			

According to the table the 2 factors with highest mean () this shows both of them affect the brand awareness of diagnostic centers, depends on them and their std deviation is minimum displays these factors have some association with reputation and awareness of brand.

We have proved it with the help of F-test.

Hypothesis (H_0): There is significant difference between various factors and brand awareness of diagnostic centers at 5% significance level.

H1: There is relationship between factors and brand awareness.

The Table shows the ANOVA results. The results indicate the value of F is .285 which confirms the association of relationship in this study model at a level of Significance 0.916.

Interpretation: The significant value according to ANOVA table is 0.916, which is more than 0.05 that proves there is some relationship among factors and brand value.

If these diagnostic centers will change the quality as well as the quantity of these factors, it will affect brand awareness of diagnostic centers either in positive or negative way.

Conclusion

People commonly visits those diagnostic center's which are close to their area, there are very less people who do not prefer quality so they can walk an extra mile to afford a good diagnostic services. People are not so familiar with the concept of lab@home services, and even they know it than it is for Dr.lal path lab.

Suggestions

1. More than advertisement customer relationship has to be maintained.
2. Retaining the customer and to make them feel as part of the organization by keeping a data base of every patient and keep reminding them about future growth and their appointments.
3. Special treatment for the elderly aged patients.
4. In addition to this different branches should be opened as to provide ease to the customer.

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BOOK REVIEW

"The power of Social Intelligence"

Author : Tony Buzan

Reviewed By : Rajnish Shankhdhar, Assistant Prof, Marketing, Amity Business School, Amity University Lucknow

Email : rshankdhar@lko.amity.edu.

To become an effective Social person without reading this book will be like an incomplete effort one makes to pursue a successful social lifestyle. This book deeply engrosses readers in various social situations that any executive would experience while advocating the embellishment of social skills in real life scenarios. A simple message that one should never give up and constantly attempt directed efforts with full positive adjustments can turn any adverse situation favorable within no time.

The book revolves around the tips required by any individual to successfully counter social requirements that can make a lasting impact on peoples mind when ever and where ever any one faces, it can ease social pressures in minutes through application of social intelligence techniques

The book is an eye opener for all business executives as it is not just a business degree that constructs competency but also small learning from everyday life and committed social lifestyle that can teach you to solve any complex situation successfully by learning and developing social intelligence techniques.

Review Message 1:

Believing in the power of Social Intelligence:

The book constantly guides readers to believe in the magic of developing interpersonal skills of social intelligence which is to initiate the keenness to learn and flexibly adopt social intelligence techniques learning in every day work. As the author advocates that being successful socially has a fortunate immediate and positive impact on your wealth and on your physical well being. The author narrates the work of psychologist Shelden Cohen stating that diverse social networking induce a" feel good factor" that also boost the ability of the human immune system to attack invading viruses.

Review Message 2 :

Use what language you will, you can never say anything but what you are:

While feeling the increasing significance of body language the author highlights that 55 percent of all meaning conveyed in any act of communication is given by your physical demeanor, Author Tony Buzan states that your posture, energy levels, eye contact, foot movement all communicate much before the actual communication starts. Discussing the American research, he narrates that mirror neurons found in monkeys brain exactly corresponds to the speech production region of the human brain too which at times affect humans to imitate each other while communicating in the society.

Review Message 3:

A man without a smiling face must not open a shop:

This is one of the best lessons any business executive can learn, the book states that a simple smile is the best way to win and influence people, the author calls this" primary effect" and emphasizes that this is an epidemic as the connected people keep passing on the smiles endlessly throughout the day. Quoting Helen Colton from the book joy of living the author states that if you greet and hug people with appropriate gestures of affection hemoglobin in your blood also increases significantly and it is this that supplies and carries oxygen making your healthy heart and brain.

Review Message 4:

Making Connections of body language first:

How to motivate your organizations work force and make your employees cheerful to eradicate negativity is remarkably narrated here when the author here stresses upon the emerging importance of active listening and Von Restorff effect, Tony Buzan highlights that try listening for twice as long as you speak and your social intelligence will receive a big boost, concentrate on the content and not on the delivery and you will reciprocate in a good manner for your people, communication must contain open listening and mind mapping which is required in this process and any rejection of opinion must be in a sympathetic manner. To make an overall lasting effect one can also apply Von Restorff effect that is to use a distinctive stand out effect and conquer peoples' memory.

Review Message 5:

Attitood about attitude: Flight Fight Insight

Quoting Abraham Lincoln the author states most folks are about as happy as they make up their minds to be and most of us develop this by mimicking others and under peer pressure. Quoting a research report on accident finding the author mentions that if parents are good drivers their children will also be good drivers which happens through back seat mimicking as humans tend to copy best behavior, this social interaction is so great that it completely distorts our individual perceptions and overall attitude. The author further states generalizing or stereotyping others can also break one of the most fundamental laws of social intelligence that is to treat each person as a unique individual. One must develop understanding of individual temperament or attitude and must fight to understand individual person developing an insight rather than taking a flight from the situation.

Review Message 6;

Told I can't Think I can't:

Discussing the role of self confidence and positive approach, the author states that negative social stereotypes can affect the way we judge ourselves and influence our abilities and that is where commercial advertisements too play an important role in influencing mindset of consumers. Quoting the experiment done on girls for solving mathematical models, the girls finally did much better than boys after training, where initially they believed boys to be always good in mathematics performing better.

Review Message 6 :

Personalize Negotiations and Collaborate For Success:

Explaining the final trick of social intelligence the author directs readers toward collaborative effort and personalizes negotiations so it results into a win-win for all.

He narrates the story of Canadian natural History film crew elaborating the relationship between the reindeer and the wolf pack, both the animals migrated during winters to grassy lands and mutually respected each others presence except when at certain times the wolves preyed on the feeble reindeer for food only, consequently true negotiations take place only when each side exhibit mutual respect.

Narrating the tale of wolverine, grizzly bear and a she wolf hunting on the same carcass, the author states that wild life experts were amazed when they saw all three feasting turn by turn on the same carcass instead of fighting to be supreme and destroying themselves

Review Message 7:

The power of Ten

The author states here that there are 10 intelligences that we each have which are traditionally divided into three major different aspects verbal, numerical and spatial along with others like creative, sensual, physical, personal, sexual and spiritual intelligence.

Spatial is the ability of your eye/body system to perceive and successfully negotiate, physical involves your diet and personality coordination which over all influences your social interacting intelligence skills etc.

The author finally expresses concern over lack of social interaction among teenagers these days as their over reliance on machines and mobile gadgets that have eroded their memory power and this inhibits the development of social skills early in life

The book is an excellent read for the corporate world also providing an insight to the fact that any failure on the part of employee motivation also teaches employees to regain confidence through building social intelligence, which is much more than a mere University degree.

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Amity Business School (ABS), Lucknow campus, a part of AUUP is endeavouring to publish **Amity Business Journal**, a bi-annual, refereed double blind reviewed International journal, which attempts to bridge the void between academia and the corporate.

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– Basleeris, N. and Huang, M. (2004), "Preferences with frames: A new utility specification that allows for the framing of risk", Working Paper, Stanford University.

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