Editorial Board

Guidelines for Authors

Full-length research articles up to 10000 words are invited which will be peer - reviewed following a double-blind review process.

Papers should be completed in Microsoft WORD 2007

The title should be in bold capital letters, in Times New Roman 14-point font, and the names of the authors should be in Times New Roman 12 point font.

Please include a brief (25 word) biographic sketch for each author with their respective email ID at the end of the manuscript.

First page should have a footnote, separated from the text by a dotted line which gives information about each author in the format

Surname, first Name (or initials), Designation, Institute, City, Country, Email ID.

The views expressed in the articles will be those of the authors and neither the Institute nor IRJ will accept any responsibility.

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Editorial

Founded in 1973 as an educational and research organization, the Indian Institute of Cost and Management Studies & Research (IndSearch) is a premier destination in Pune for in-depth research and studies in the fields of Management and Social Sciences. Over the years, the Institute has attracted many scholars and corporate managers to pursue serious research through its Ph.D. programs, sponsored research by government and International Agencies. Also the Institute organizes public debates and discussions involving eminent persons on variety of subjects of current interest such as Sustainability Management, Alleviation of Poverty, etc. These have resulted in a number of Institutes Publications. However, the need for a quality research journal publishing high end research output has long been felt by the academics and students.

IndSearch Research Journal (IRJ) is thus in fulfillment of the need for a journal aiming Originality, Quality and Relevance whose first edition is launched with this issue. It is hoped that the academic community will receive IRJ with enthusiasm and publish their well researched articles, focusing on current issues in management and social sciences, from time to time. IRJ will be a bi-annual Journal.

This issue features four papers and one case study.

The case study by Anand Karandikar explores why the largest selling veterinary drug in the world does not sell well in India and brings into focus the special condition in Indian Dairy farms that have to be considered by marketing professionals.

Kalpakam Gopalkrishnan in her research paper on performance of mid-cap mutual funds using Treynor ratio shows that top funds are consistent in delivering returns than average and poor Mid-Cap funds.

Sunita Joshi et al in their study of thought leaders as brands for marketing consulting services organizations conclude that they are prime movers of the Intellectual Capital of their organizations and lead the organizations growth and success.

R. S. Mali et al have made an interesting study between Quality Assurance and Quantitative Growth in Higher Education. This should provoke good discussion among academics.

In their experience sharing article L. Ramakrishnan et al evaluate the post graduate diploma program in Environmental Management in their institute vis-a-vis the different stack holders concluding that such a program as a stand-alone course may not be an attractive proposition as of now.

Selling Drug for De-worming of Cattle to Indian Dairy Farmers

Karandikar Anand (*)

Mr. Goyal, Marketing Director of RatanLab had convened a meeting of his all regional sales managers at his office in New Delhi. In the meeting Mr. Goyal directly came to the main question bugging him, "Ivermectin is the largest selling drug world over for de-worming in cattle, offered by an MNC in India. It will be out of patent regime very soon. We can make the molecule without problem. Should we market it? I am surprised that the global trend is not evident in India. Ivermectin does not sell much in India. Why?" He expected his Regional Sales Managers for Maharashtra and Gujarat and Punjab, Sanjay and Ajay and Avatar, to provide a convincing explanation as the MNC had a very strong presence in these large veterinary medicines markets in the three states.

Mr. Goyal continued with the supplementary questions, "I know the MNC has priced the drug very high, Rs250 a dose, is low sales entirely due to the high price? What is the market size? Is it grossly overestimated? Is the efficacy of drug less for Indian cattle and Indian worms? Or is it that the awareness levels with the farmers are so low? Given the fact that farmers have their own way of deciding preventive and curative treatments; does this drug not fit strongly in their consideration set? Are there several other contributory factors?"

All the regional sales manager were taken aback by this unexpected barrage of question coming from the big boss. Avatar stared the response, "highly fragmented cattle population in the country is a Sales Manager's distribution nightmare. Spread over a very wide geographic area, the cattle population is extremely difficult to reach through a good retail network. Small farm-holdings tucked away in every nook and corner of the country make it impossible for any marketer to reach a substantial proportion of the market. Besides, the costs of sales promotion and transportation raise the end price substantially."

"Don't give me the general and standard excuses for not achieving the sales, I know them by heart"- barked Mr. Goyal. He continued, "I want specific information and analysis. Please tell me what to do to grab this opportunity, if it is an opportunity."

There was an eloquent silence.

Mr. Goyal continued, "I know you are not prepared. Not your fault. Sanjay and Ajay, you are from IRMA, you are experts in selling products to farmers, yes? And the major markets are in your states. You will make an in-depth investigation and help me understand the root cause of the problem. Also I want your well reasoned recommendation on what to do. … And yes, do it within 15 days. I have to report to the MD, before the board meeting."

Sanjay and Ajay looked at each other dismayed by the daunting task given to them and the short time available. Avtar's face brightened, he could not hide his relief!

Sanjay and Ajay worked hard for the next 14 days (and nights), compiled a lot of information from secondary sources, talked with their field personnel, talked with some veterinary doctors on their panel and even found time to talk with a few progressive dairy farmers. The summary report, as prepared by them, is reproduced in the following paragraphs.

Market for De-worming Drugs in General and Ivermectins in Particular

Prepared by
Sanjay Patil – Regional Manager, Maharashtra
Ajay Vora - Regional Manager, Gujarat

For
Mr. V. K. Goyal – Marketing Director

Background

Milk production in India, which more or less remained stagnant during 1950 to1970 with a very low growth rate of 1% per year, increased exponentially thereafter as a result of White Revolution. India has emerged as the largest producer of milk in the world. The per capita availability of milk has increased from 112 gm per day in 1970-71 to more than 225 gm per day.

(*) Distinguished Professor, IndSearch, Pune & Founder Director, Metric Consultancy Ltd. His area of specialisation is Marketing Management and Rural Marketing.
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Integrated animal healthcare takes into consideration the diversity of livestock and the environment. It combines animal treatment with disease prevention through vaccination, improved management, feeding, sanitation, and clean water. One of the major reasons for the low per animal productivity of milk is the parasitic infestation.

Ivermectin

In the mid-1980's, ivermectin was introduced as probably the most broad-spectrum anti-parasite medication. Ivermectin (22,23-dihydroavermectin B1a + 22,23-dihydroavermectin B1b) is a broad-spectrum antiparasitic medicine. It is effective against parasites within the body (endo-parasites) and parasites residing on the skin outside the body (ecto – parasites). It is effective against most common intestinal worms (except tapeworms), most mites, and some lice. It is not effective against fleas, ticks, flies, or flukes. It is effective against larval heartworms (the "microfilariae" that circulate in the blood) but not against adult heartworms (that live in the heart and pulmonaryarteries), though technically it can shorten their lifespan.

The most common uses in small animal practice for ivermectin would include:

- Monthly prevention of heartworm infection
- Treatment of ear mite situations
- Clearing heartworm larvae in active heartworm infection
- Treatment of sarcoptic, notoedric or demodectic mange

Ivermectin is the largest selling drug world over for removing Endo and Ecto parasites in cattle. While in development, it was assigned the code MK-933 by Merck. It is available in tablets /chewables for heartworm prevention, topical solution for ear mite treatment or as oral or injectable solution for other parasite problems.

Ivermectin is sold under brand names Heartgard, Sklice, and Stromectol in the United States, Ivomec in Europe by Merial Animal Health, Mectizan in Canada by Merck, and Ivexterm in Mexico by Valeant. In Southeast Asian countries, it is marketed by Delta Pharma Ltd. under the trade name Scabo 6.

Ivermectin was introduced in India around 1985 by the MNC. The current annual sales of Ivermectin are estimated to be about half a million doses valued at Rs.125million.

(The life and times of ivermectin - a success story by S Õmura @ courses.umass.edu/mic590s/2009/Reading/Omura2004.pdf - makes interesting reading)

Incidence of Endo Parasites in Indian Cattle

Faecal sample data on parasitic infestation in cattle and buffaloes is collected by government veterinary dispensaries in Pune district on routine basis. This information, collected by four dispensaries, has been compiled specifically for the present report.

Table: Incidence of Endo Parasites in cattle and buffaloes in Pune District

	Faecal Samples Tested				**%e Samples found positive**			
Name of Centre	**Total samples tested**	**C.B cows**	**ND cows**	**She buffaloes**	**Total positive samples**	**C.B cows**	**ND cows**	**She buffaloes**
Daund	90	32	9	49	47	47	67	53
Bhigwan	88	45	26	17	25	40	15	30
Kedgaon	25	13	-	12	7	31	-	25
Khed	93	93	-	-	33	35	-	-
Total	296	183	35	78	35	38	29	41

Incidence of Ecto Parasites:

The incidence of ecto-parasites has not been quantified mainly because the veterinary dispensaries do not maintain any data on the subject. However, Dr. Salve of Government Veterinary College, who is an authority on the subject, has furnished the following guesstimates of ecto parasite incidence.

1. Cattle and Buffaloes 55%
2. Pet dogs 30%
3. Scabies (Mites), all animals 20%

Benefits of De-worming

A veterinary college in Gujarat is currently studying the impact of de-worming drugs on more long term basis. They have shared their interim findings on an assurance that their name will not be disclosed.

Table: Incidence of Endo Parasites in cattle and buffaloes in Pune District

Description	Control (%)	Treatment (%)	Variation (%)
Milk yields from previous lactation (liters./head/day)	13.32	13.49	NS
Milk yields from experimental lactation (liters./head/day)	12.61	14.03	1.42
Lactation length (days)	290.60	317.80	27.20
Time to first oestrus (days)	41.10	32.90	8.20

The above analysis clearly indicates that the treatment of gastrointestinal parasitic infection leads to : (a) Increases in milk by 11.26% per lactation (b) Increases in length of lactation by 27.2 days (c) Reduction in time to first oestrus by 8.2 days

Very similar impact was observed in the case of buffaloes as well

Benefit Cost Analysis

Benefit Cost Ratio when drugs other than Ivermectin are used for De-worming

The National Dairy Development Board (NDDB) team from Anand worked on the subject for both dairy cows and buffaloes and have given figures of net profits for the period of observation, i.e. 100 days, when de-worming drugs (other than Ivermectin) are used. There key findings: “At the prevailing prices of milk and anthelmintic, a net profit of Indian Rs. 844/- above the cost of anthelmintic would be obtained from the additional milk produced by each treated cow in the first 100 days of lactation.” “The production of additional milk per treated buffalo in the 100 days observation period resulted in additional income of Rs.672 per buffalo. The cost of treatment was Rs.136 per animal.”

Benefit Cost Analysis when Ivermectin is used

No.	Description	Cows	Buffaloes
1.	Milk yield per lactation	3000 ltrs.	2000 ltrs.
2.	Incremental yield at 10%	300 ltrs.	200 ltrs.
3.	Rupee value of increased yield	Rs. 4500	Rs. 5500
4.	Incidence of parasites	30%	30%
5.	Benefit	Rs. 1350	Rs.1650
6.	Cost of using 1 dose of ivermectin	Rs. 250	Rs. 250
7.	Benefit to cost ratio	Rs.1350 : Rs. 250	Rs.1650 : Rs. 250
	That is	5.5 is to 1	6.6 is to 1

(Based on the estimates given by Mumbai Veterinary College)

De-worming practices of Indian farmers

We requested the regular market research agency of the company, 'Facts & Facts' to help us understand the de-worming practices of the farmers The agency covered 15 respondents in Mumbai, 80 Farmers In rest of Maharashtra and 70 farmers in Gujarat. The relevant summary of their findings is as below:

Table: Summary of report from Farmers Dip Stick Survey by Facts & Facts

No.	Aspect	Mumbai	Rest of Maharashtra	Gujarat
1.	Estimated incidence by farmers of endo-parasites in			
	% of Crossbreed cows	30%	54%	43%
	% of local cows	NA	60%	65%
	% of buffalos	45%	50%	55%
2	Estimated incidence by farmers of ecto-parasites in			
	% of Crossbreed cows	20%	40%	35%
	% of local cows	NA	72%	53%
	% of buffalos	60%	68%	45%
3	% who practice preventive de-worming	55%	5%	9%
	% who use only allopathic medicines for preventive de-worming	45%	1%	5%
	% who use only Traditional medicines for preventive de-worming	Nil	4%	3%
	% who use both type of medicines for preventive de-worming	10%	Nil	1%
4	% who practice curative de-worming	95%	35%	55%
	% who use allopathic medicines for curative de-worming	55%	25%	40%
	% who use Traditional medicines for curative de-worming	34%	8%	9%
	% who use both type of medicines for curative de-worming	6%	2%	6%
5	% who use Ivermectin for preventive de-worming	12%	Nil	Nil
6	% who use Ivermectin for curative de-worming	15%	2%	3%

Health care practice of milk animals is found to be most developed amongst stable owners in north Mumbai suburbs. The dairy owners in Mumbai are more professional in their approach and each dairy has a contracted veterinarian who visits their stables twice a week. These farmers totally depend on the doctor's advice and hence did not resort to the use of any traditional remedies for their herds.

Practice of de-worming of animals in Gujarat is more developed in comparison to Maharashtra, because of the dairy co-operative societies which are very active in the state. The doctors appointed by diaries visit the villages regularly for check up of animals. The doctors very often supply the drugs free of cost.

Use of traditional medicines for de-worming

The dip sick research by fact finders has indicated that a majority of farmers in Maharashtra and Gujarat use only traditional medicines for preventive de-worming. We therefore carried out quick qualitative investigation in this practice of dairy farmers. 20 of the 25 participants in the two focus group discussions in Baramati (agriculturally very advanced area near Pune) mentioned the use of traditional remedies for treatment of parasitic infections.

Farmers closely observe their animals and environment. They know when an animal is sick. They have names for the different animal diseases and know animals of which age and sex are commonly affected. Over centuries, through trial and error and deliberate experimentation, farmers have developed a wide spectrum of prevention and treatment methods. These include the use of medicinal plants, vaccination, branding, and bone-setting as well as the provision of shelters adapted to the local conditions, the exploitation of a wide range of fodder plants and many other management practices. In India ethno-veterinary medicine partly overlaps with Ayurveda, as both often use the same plants.

Allopathy, Ayurveda, homeopathy and several others are used by dairy famers in animal production and healthcare. Each approach is perceived as having its own strengths and drawbacks. Allopathic remedies are seen as highly potent and working fast. But they are costly and difficult to access in remote areas. Besides, they may have side effects. Farmers are also worried about 'spurious' allopathic drugs; then they pay high price and get no results. Homeopathy and Ayurveda, on the other hand, are seen as slow acting drugs. For epidemic diseases and any life-threatening conditions allopathic drugs are preferred. Worms are seen as a chronic, not very serious hazard.

The commonly used traditional remedies for worms in Maharashtra are

a) Juice of neem leaf with water.

b) A mixture of sugar, salt and chalk in water.

c) Mixture of neem juice with turmeric & asafetida in water

d) Juice of a kind of wild tamarind (commonly known as English tamarind) in water.

e) Sweet oil or mustard oil in water

In Gujarat, the practice of using traditional medication is observed to be relatively low. The commonly used traditional remedies in Gujarat are

a) Feeding of cumin seed powder in water or through feed and

b) Asafetida along-with sweet or mustard oil in water.

Doctors' Prescription Practices for De-worming

Pharmaceutical Shop Audit Report available from a Market Research agency are not at all useful for veterinary medicines sold in rural area. There is no reliable information available on veterinary doctors' prescription behavior. The authors personally interviewed 22 doctors and conducted a focused group discussion to get an idea about the role they play.

Their estimates varied from 20% to 50% regarding serious incidence of worms in cattle and buffaloes. However, they all agreed that the consequent losses are far higher in crossbred cows.

For treatment of endoparasites, the drug of choice amongst doctors or the most widely prescribed drug, in both the states, has been Albomar (Albendazal of Glaxo) and in a few cases Panacur (Fenbedazol of Hoechst India). For the treatment of ectoparasites, the common practice was giving Gamma BHC or Malathion bath to the animals. Two doctors also indicated use of Butox (Cadilla Labs) for dual treatment.

Although the doctors are aware of the efficacy of Ivermectins, they do not regularly use or prescribe it. Of the 22 doctors interviewed, only 3 practitioners from Mumbai confirmed the use of Ivermectin.

Why Ivermectin is not the largest selling drug in India for de-worming of cattle? (when it is the largest selling drug in Europe)

There are major and significant differences between dairy animal rearing practices in India and In Europe (and in USA) which we consider to answer this puzzle. For Europe, the following aspects stand out:

- Cow is the milk animal, buffalos are absent; and cows are more affected by worms.
- In Europe the heard sizes are very large, in hundreds.
- Each cow has much higher milk yield, therefore losses due to worm infestation are much higher.
- Manpower, particularly qualified veterinary doctors and attendants is high.
- Cost of finding out which particular cows in the heard have worms, by testing fecal samples, is very high in view of the large heard size and high cost of manpower.

It is therefore economical (see annexure 1) and convenient to do preventive de-worming for all cows at one time using a broad spectrum de-worming drug which will simultaneously get rid of most of the endo-parasites and ecto-parasites. The visiting Veterinarian, in one visit, carries out examination and treatment of all cows including vaccination, periodic de-worming, etc.

In India heard sizes are small. Often farmers have only one cow or buffalo in milk. The losses due to worms are low because the milk yield of the animal is low. Periodic / preventive de-worming means that he uses de-worming drug at regular intervals, say once in six months. If he de-worms his one cow / buffalo as a routine practice and the animal did not have worms, the efforts and costs are wasted. If he uses ivermectin, two times in a year, as a periodic, routine practice for a cow which did not have worms then his loss on account of cost of drugs alone is Rs 500/-. As the data collected by us shows, the probability of cow/buffalo having worm infestation which requires treatment is between 30% and 50%. In other

words, chance that animal does not have serious worm problem is between 50% and 70%. Therefore, if a farmer with one animal in milk adopts the practice of regular de-worming then he will be a loser at least 50% of the times. This is a very high chance of loosing for an investment decision. The losses of Rs.500/- in a year are also large in comparison with his net annual income from rearing the cow/buffalo.

Does the farmer make all these calculations for the heuristic decision making? We explored this aspect during the focus group discussions with farmers. There were frequent comments and questions of the following type:

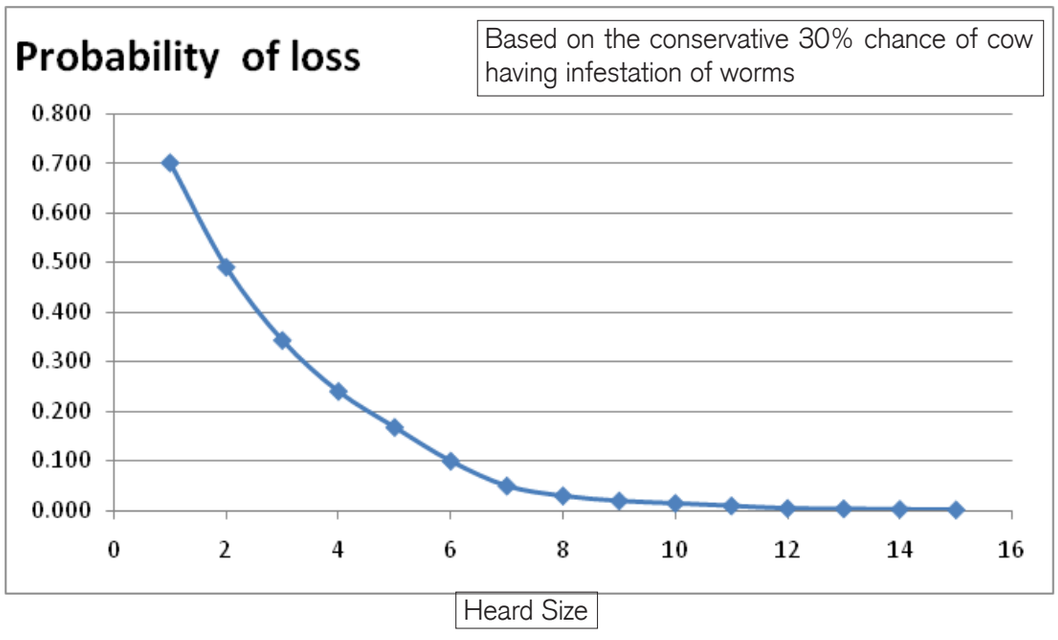
- Can I know for sure that my animal has worms before doing the de-worming?
- What are the symptoms when de-worming drug should be used?
- Will it not be better to ensure no worm infestation takes place in the first place?
- This drug may be good for those large organized farms, I am a small man.
- I regularly feed Juice of Neem leaf with water to all the cattle, worms or no worms - I do not bother; ultimately it costs almost nothing.

These comment acquire grater and new significance in the light of the above discussion. The farmers do not calculate numerically and exactly the risk-return pay-off but they are generally aware of the problem. The basic psychology if 'investors risk aversion', which we studied in theory, says that investors tend to overestimate the risk when they cannot estimate it precisely. Farmers also, perhaps, overestimate the risk and further inclined not to use any costly treatment for periodic de-worming of all cattle.

The problem is further aggravated because there is no easy and symptomatic method of deciding that the animal has worm infestation which requires treatment. Symptoms like hair on body standing up, loose motions and drastic fall in milk yield occur only when the worms reach alarmingly high levels. Significant fall (say10%) in milk yield, Irregular and delayed cycles of coming in heat happen at much lower levels of worm infestation but these symptoms can occur because of many other reasons as well. The farmer's economic losses are significant even when level of worm infestation is not very acute. The only reliable method of detecting worms at this level is fecal sample examination under a microscope.

Incidentally, we must anticipate and answer a question before we proceed to our recommended plan of action. The question is,"What about farmers in Europe? Do they not face the same risk of making losses?"

We have analyzed the problem from view point of a typical Indian farmer who has only one cow or buffalo in milk. The situation changes dramatically and quickly as heard size increases. The graph below shows the probability of making losses because ivermectin is used for periodic de-worming as a function of increasing heard size. We have analyzed the problem from view point of a typical Indian farmer who has only one cow or buffalo in milk. The situation changes dramatically and quickly as heard size increases. The graph below shows the probability of making losses because ivermectin is used for periodic de-worming as a function of increasing heard size.



It can be seen that chance of making a loss become 1% when farmer has 10 cows in milk and the chance becomes less than 0.05% when heard size is larger than 15 animals in milk. In Europe the heard size is almost always bigger than this!

Our recommendation

We have put together most of the relevant facts. We are of the opinion that the conventional approach of promoting Ivermectin through veterinary doctors and educating farmers regarding benefits of de-worming will yield very limited results because the problem of farmer's risk aversion will not be overcome.

Government institutions are not able to efficiently deliver most of the livestock services like vaccination, de-worming etc. due to financial as well as bureaucratic constraints. This necessitates the need for providing efficient and effective decentralized services in tune with the demands emanating from the users. Such services should be delivered at farmer's door and linked with cost recovery for economic viability.

Specific marketing strategies are required to be aggressively implemented for overcoming farmer's risk aversion. We propose a special marketing initiative, titled RAHI (RatanLab's Animal Health Initiative). The market will not be price sensitive if Ivermectin is promoted through WAHI and the company can earn good margins..

Idea of RAHI

The core activity will be a value adding service – farmers will be offered a fecal sample examination under a microscope in their village so that they can know for sure which of their cattle need treatment for worms. This requires only 100X microscope which is handy and cheap. The farmer can see for himself the number of worm eggs in the sample. He will be then offered immediate, on the spot treatment for the infested cattle.

There will be a mobile team moving with microscope and enough doses of Ivermectin. The team will consist of a veterinary diploma holder (equivalent to a Live Stock Supervisor in Government service) and an assistant. They will be based in the taluka town and move on motorcycle. They will visit every target area once in a year. Their visit schedules will be announced trough local newspapers and veterinary chemists shops in the area and milk collection vans.

Target areas for RAHI

The RAHI should be launched in areas where dairying is well developed. Eight districts may be selected in each state (initially 16 districts in the states of Maharashtra and Gujarat). An illustrative list of eight such districts in Maharashtra, along with the population of target cattle in these districts, is given in annexure 1.

The population of dairy cattle is not uniformly distributed amongst all the villages. Our analysis of secondary data shows that 30% of the villages have 70% of the population. These villages with high population density should be selected as the nodal villages for

RAHI. The likely population of cattle in a typical nodal village, as estimated from secondary data, is given below:

Target Population in a Typical Nodal Dairy Village

One RAHI team will cover 20 village clusters in a month; say 250 village clusters in a year

Type of cattle	**Average Numbers**
Heifers	64
CB cows in milk	172
Buffalos young	46
Buffalos in milk	168
Sub Total	450
add in flow from neighboring villages at 20%	90
Total available target cattle	540

Sales of Ivermectin per RAHI team :

1. A village cluster, say of three villages will have a total target population of 540 x 3 = 1620 nos.
2. Assuming at least 33% farmers get fecal samples checked,
3. The animals checked will be 540 nos.
4. @ a very conservative 20% incidence, 108 animal will test positive for worms
5. Assuming 40% of animals which test positive are de-wormed,
6. 43 doses, say 40 doses, of Ivermectin will be sold in the village cluster
7. Sales will be 40 doses x Rs.250 per dose = Rs.10,000 per day in each village cluster.
8. We estimate sale of 10,000 doses (250days X 40 doses per day) of ivermectin valued at Rs.25,00,000 per RAHI team per year.

Cost of one RAHI team

Item of cost	**Cost/year (Rs)**
Salary of Live stock supervisor	2,40,000
Salary of assistant	1,20,000
Petrol and maintenance of M/cycle	1,00,000
Local publicity	50,000
Out of pocket expenses	40,000
Total cost of one team	5,50,000

Overall benefit cost analysis of RAHI :

Number of villages to be covered : at 400 villages per district for 16 districts	6400 nos.
Number of RAHI teams required : at one team per 240 villages	27 teams
Total annual cost : at Rs.5,50,000 per team for 27 teams	Rs.1,48,50,000
Total annual sales : at Rs.25,00,000 per team for 27 teams	Rs. 6,75,00,000
Number of doses of ivermectin sold : at 10,000 doses per team for 27 teams	2,70,000 nos.
Cost of promotion through RAHI per dose	Rs. 55 per dose That is 22% of sales price

An annual sale of Rs.6.75 crores can be achieved in one state and the promotional cost will be less than distributor's / retailer's margin, which will be totally saved.

Sanjay Patil
Regional Manager, Maharashtra

Ajay Vora
Regional Manager, Gujarat

Questions for discussion :

1. Did Mr. Goyal correctly pose the problem?
2. Evaluate the report submitted by Sanjay Patil and Ajay Vora for Comprehensiveness, Objectivity and Creativity.
3. What additional aspects, if any, should have been considered by Sanjay and Ajay?
4. Do you think RAHI will succeed? Why?
5. Can you think of other situations where Risk Aversion by the investor- buyers is a major consideration while planning sales strategies for a product or a service?

Annexure 1

Target Cattle Population in Eight Districts of Maharashtra

		Crossbred Cows			Buffaloes			
		Heifers	**Over 3 yrs in milk**	**Total Crossbred**	**1 to 3 yrs**	**Over 3 yrs in milk**	**Total Buffaloes**	**Total Target Catle [3+6]**
	Name of District	1	2	3	4	5	6	
1	Nashik	11408	25264	36672	25030	59584	84614	121286
2	A'Nagar	46977	113101	160078	18367	46091	64458	224536
3	Pune	36793	98289	135082	26268	95882	122150	257232
4	Satara	16868	48338	65206	35669	120394	156063	286475
5	Sangli	8343	26803	35146	37893	153114	191007	226153
6	Solapur	12522	34078	46600	30513	89931	120444	167044
7	Kolhapur	6811	28871	35682	48645	267290	315935	351617
8	A'bad	9450	20895	30345	10030	31873	41903	72248
	Total	149172	395639	544811	232415	864159	1096574	1641385

Performance of Indian Midcap Mutual Funds in The Economic Cycles

Kalpakam Gopalakrishnan[1]

Abstract

This study focuses on midcap mutual funds that invest mainly in shares in the midcap space. A study of this kind is necessary due to the fact that the period of study happens to be the first decade for midcap mutual funds. Performance has been evaluated based on returns and risk adjusted returns based on Treynor ratio. After evaluating the performance of midcap funds, the study has come out with the conclusions by grouping the top performers, poor performers and average performers. The results of this study indicate that the top funds are consistently good at delivering returns and low on risk over the study period. Poor performers are always the last as far as returns but high on volatility and the average performers are not consistent.

Key words: Performance of mutual funds, risk and return of mutual funds

Introduction

India is an emerging economy and a promising destination for investment. The impetus to this growth is provided in a major way by the medium sized companies in India. These are the potential winners and undervalued and undiscovered gems in the economy. As investors, there are great gains made in these mid cap investments. The India growth story attracts the Foreign Institutional Investors (FIIs) across the globe. With a GDP growth of 8% plus coupled with FII participation has seen the stock indices cross the 20000 mark and the Indian investor is also increasingly getting drawn to invest in Indian stock markets. But with little knowledge, time and expertise in investing, investors find mutual funds a convenient way to invest. Midcap mutual funds that invest in the medium capitalized companies which account for the growth of Indian economy have delivered very high returns of over 30% growth in the past decade and aptly fits the slot for the investors looking to participate in the India growth story. For instance, during the quarter ended Sept 2009, the returns were 6.8 % while large caps have returned 6.5%. An in depth analysis of midcap funds is required for a deep understanding and more so in the first decade of existence of these funds. Therefore this research is an attempt to evaluate the performance of midcap mutual funds over the period 2004-2010.

Midcap Funds

Mid cap funds are those mutual funds that invest in medium sized companies. As there is no standard definition classifying companies as small or medium, there are many versions for medium sized companies. According to the Value Research, a leading online mutual fund portal, companies totaling up to 70 per cent of the total market cap of the BSE are large cap companies mid-cap companies are another 20 per cent of the total market cap and small caps are the remaining 10 per cent.

There are other sources which put mid cap companies as companies whose market capitalization is between Rs.200 crores to Rs.5000 crores. Yet others classify it as companies whose market capitalization as between Rs.500 crores and Rs.1000 crores. Moreover, the capitalization is a moving figure. National Stock Exchange (NSE) defines the mid-cap universe as stocks whose average six months' market capitalisation is between Rs 75 crore and Rs 750 crore. For the purpose of this study, midcap companies mean companies of medium capitalistion and classified according to the objective of the mutual scheme which intends to invest in the midcap category of shares.

One of the typical problems of investors is that at the time of investment, the fund seemed to be performing well but over a period of time their investment has got eroded. Investors need information over a period of time and not just over the previous one year before investing in a particular fund. This study has evaluated the performance of Midcap Mutual Funds for over a longer span, 2004 to 2010, which also happens to be the first decade of existence of midcap funds in India. An attempt was made to study midcap fund which would be highly useful to all stakeholders: to investors to get a comparative analysis of midcap funds which helps them multiply their wealth , to the fund houses to understand themselves in comparison with other midcap funds, to FIIs to participate in India growth story and other stakeholders in the economy.

Every fund invests in midcap shares, be it a major percentage of its portfolio like in a midcap fund or a negligible percentage as in say, Income Funds to get higher returns and beat the chosen index. In order to understand this midcap category, only a fund investing a major portion of its investments in midcap category can indicate the true performance of funds investing in the mid cap space.

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Literature Review

Mutual Funds are one of the most important investment avenues in the Emerging Indian markets. With over 832 schemes to choose from (September 2009), the retail investor faces problems in selecting a fund. Apart from the returns generated by a scheme, factors such as investment strategy and management style , fund portfolio are other important aspects which have a bearing on the capacity of mutual fund schemes to generate future returns. Though past performance alone cannot be indicative of future performance, it is the only quantitative way to judge how good a fund is at present. Therefore, there is a need to correctly assess the past performance of different mutual funds.

Several sophisticated empirical testing of mutual fund investments have been undertaken with the pioneer classic mutual fund study known as the Wharton Report completed for the Securities and Exchange Commission by Friend et al.(1962). With annual data from 1953 to 1958, they evaluated 152 mutual funds and found that the average returns were 12.4% while the benchmark index returned 12.6%. The authors concluded that the results do not suggest a widespread inefficiency after taking into account the fund expenses.

Building on this report and the early works of Sharpe (1966), Treynor and Mazuy (1966), and Jensen (1968), a large body of literature has examined mutual fund investment performance. During the past 15 years, numerous studies have undertaken extensive tests of mutual fund managers' market timing ability (e.g. Fabozzi and Francis, 1979; Kon and Jen, 1979; Alexander and Stover, 1980), etc. Treynor in 1965 came out with a performance measurement tool which evaluated a portfolio based on market risk, beta. Beta value represents the degree of variation in the portfolio value compared to the market portfolio. He measured portfolio performance as the risk premium per unit of market risk generated by the portfolio.

A closely related measure was propounded by Sharpe. He replaced market risk with total risk parameter ie standard deviation with the premium generated by the fund over the risk free return. Other important study were that of Jensen (1968) who came out with alpha which is the excess premium generated for a given risk.

Wermers (2000) supports the value of active management because he finds that mutual funds generally pick stocks well enough to cover costs, and that high turnover funds beat the passive Vanguard Index. On a net return basis, however, Wermers's results indicate that mutual funds underperform broad market indexes by 1% per year because of lower returns of their non-stock holdings and because of expense ratio and transaction costs of portfolio turnover.

Hubner George (2003) used a sample of nine mutual funds, each of them being in the top ten performing fund, in absolute terms, of their category over either a one-year or a five-year period ending April 1, 2003, with an additional requirement that all funds should have a nine-year history of returns. Categories have been defined as the classical Large/Midcap/ Small and Growth/Blend/Value styles. The asset pricing model of reference is the four-factor specification put forward by Carhart (1997).

A study of the Spanish mutual funds by Luis Ferruz, José Luis Sarto, Laura Andreu in May 2008 covering a period 1995-2004 examines the influence of downside risk metrics when it comes to evaluating the performance persistence of Spanish money market funds. such as semi-standard deviation and absolute deviation, they try to provide more appropriate performance rankings than those obtained with classic indices.

Zakri Y. Bello Lisa A. C. Frank (2010) evaluate the performance of equity mutual funds to determine whether a decline in expense ratios had a measurable impact on fund performance. Their results show that both expense ratio and portfolio turnover are negatively associated with investment performance. The decline in fund expenses does not appear to be significantly beneficial to fund investors.

In India, Jain (1982) pioneered the work on financial performace of UTI schemes for the period 1964-65 to 1979-80. Later UTI floated first equity fund called Mastershare in1986. Thereafter a considerable interest was generated by analysts and academicians. Barua and Verma (1991) concluded that in terms of rate of return it was satisfactory for large investors by studying the 7- year close ended equity mutual fund, Mastershare. Gupta and Sehgal (1997) concluded after studying 80 mutual funds from 1992-96 that they fared reasonably well.

Bijan Roy (2003), et. al., conducted an empirical study on conditional performance of Indian mutual funds. This paper uses a technique called conditional performance evaluation on a sample of eighty-nine Indian mutual fund schemes from 1999-2003.

Kshama Fernandes (2003) evaluated index fund implementation in India. In this paper, tracking error of index funds in India is measured .The consistency and level of tracking errors obtained by some well-run index fund suggests that it is possible to attain low levels of tracking error under Indian conditions. At the same time, there do seem to be periods where certain index funds appear to depart from the discipline of indexation.

Most of the research was done by taking schemes from many categories and capitalization of mutual funds but no studies have been carried out with the main focus on midcap mutual funds which were started in a big way from 2002. This study focuses on midcap funds that invest majorly in midcap stocks . A study of this kind is necessary due to the fact that the period of study happens to be the first decade for midcap funds.

Objective of this study

1. To evaluate the performance of midcap mutual funds during the various economic cycles starting from 2004 when the momentum for midcap mutual funds started.
2. To evaluate whether midcap mutual funds have generated better returns as compared to the benchmark returns
3. To analyse whether higher return in midcap funds are accompanied by higher risk.

As midcap funds are actively managed funds, they are expected to perform better than the benchmark index and this study has also attempt to understand the performance and study the risk vis a vis returns during the various periods under the study.

The hypotheses of the study have been framed as-

1. H0 : There is no difference in returns between Midcap Mutual Funds and CNX Midcap returns

   H_1 : There is difference in returns between Midcap Mutual Funds and CNX Midcap returns
2. H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between March 2009 and December 2010 (after the meltdown)

   H_1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between March 2009 and December 2010.
3. H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between January 2008 and February 2009 (during the crisis)

   H_1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between January 2008 and February 2009.
4. H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between June 2004 and December 2007(before the crisis)

   H_1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between June 2004 and December 2007.

Research Methodology

The performance of midcap mutual fund schemes have been evaluated by using the Net Asset Value of the schemes (midcap schemes for this study). Monthly NAV of growth schemes are used for the analysis which is drawn from a reputed source called MFI Explorer of ICRA Online, a leading mutual fund rating agency.

Out of eighteen schemes that existed, the Net Asset Values of 12 Midcap mutual funds have been used. The criteria that has been used is that the scheme has been in existence at least for three years before this study was started and the Assets Under Management is above Rs.20 crores during the study period. The AUM of these 12 midcap schemes constitute more than 80% of AUM in the midcap category.

The performance evaluation has been done on the basis of annualized returns and risk adjusted return-Treynor ratio. Further in order to distinguish the performers from poor performers, a graph is drawn using the risk and returns of each scheme.

Firstly the data over the years were grouped into the bull and bear phase of the stock market. Accordingly the period of six years have been divided into three periods of bull and bear markets ie. June 2004 to December 2007(bull phase),

January 2008 to February 2009 (bear phase) and

March 2009 to December 2010 (bull phase).

For calculating the annualized returns, the mean monthly returns of the growth schemes were calculated and then annualized for all the selected schemes in the sample which gives the relative performance of various schemes. They are also benchmarked with the CNX Midcap.

In a diversified portfolio, only market risk is present and therefore Treynor ratio is used. The Risk Adjusted Return, Treynor ratio was also calculated and compared to arrive at their performance. A 91-day Treasury Bill is used as a proxy for risk-free rate. The rationale is that many Asset management companies typically use a 91-Day Treasury Bill in the industry. Beta measuring the volatility of fund returns is used to measure risk and was calculated for the monthly returns of the sample schemes.

Further to separate the top performers from the poor performers, the risk and the returns were ranked separately for each of the economic cycles and represented them on a graph. The graph clearly separates the performers from the non performers in terms of risk and returns.

Findings

One of the most important parameter for evaluating a mutual fund is returns. In this study, the annualized returns of the scheme has been calculated

a) Returns: The ultimate objective of investment is to earn good returns. The mean monthly returns are annualized for each of the bull and bear phases of the stock market.

All the schemes performed better than the CNX Midcap in the bull phase starting March 2009. Midcap funds are actively managed funds and therefore should return better than their benchmark index-the CNX Midcap. The average returns of midcap schemes were at least 6% more than the benchmark returns. The CNX midcap returned 54.12% . In other words, when the stock markets recovered after a meltdown, all the midcap funds have performed better than the CNX Midcap. Midcap stocks being high beta stocks and the positive sentiments of the market and fund manager could be some of the explanations.

Table 1 : Percentage Returns of Midcap Mutual Funds between 2004-2010

	Jun 04-Dec 07		**Jan 08-Feb 09**		**Mar 09-Dec 10**	
	annualised return	Rank	annualised return	Rank	annualised return	Rank
Birla Sun Life Mid Cap Fund	57.83	5	-78.44	3	64.17	4
DBS Chola Midcap Fund	51.43	9	-82.33	6	66.71	2
Franklin India Prima Fund	52.13	8	-85.09	9	61.93	5
HDFC Capital Builder Fund	53.83	7	-69.19	2	58.74	8
HSBC Midcap Equity Fund	54.91	6	-91.02	10	55.40	11
ICICI Emerging STAR Fund	61.14	3	-96.28	11	60.64	7
Kotak Midcap Fund	48.75	10	-82.55	7	58.32	9
Reliance Growth	58.70	4	-68.27	1	56.29	10
SBI Magnum Midcap Fund	61.63	2	-107.63	12	64.19	3
Sundaram BNP Paribas Midcap	64.61	1	-80.46	5	69.64	1
Tata Midcap Fund	39.02	12	-83.60	8	54.65	12
UTI Mid Cap Fund	45.78	11	-80.28	4	61.40	6
Average	54.15		-83.76		61.01	
CNX Midcap	47.04		-78.58		54.12	

Sundaram Midcap is the top performer with a return of 69.64% annualized. and Tata Midcap was the least with 54.65% returns. An average return for the midcap category during this period is 61.01% which is well above the benchmark. It can be observed that the annualized returns are higher after the market meltdown.

One of the important concern for an investor is not just the percentage returns but whether his/her investment has crossed the highest NAV that existed in December 2007 when the markets were at the peak. Only 4 funds have crossed the peak NAVs. They are Sundaram Midcap (Rs151 to 163), Reliance Growth (Rs472 to Rs501), Birla Sunlife Midcap (114.7 to Rs118.78) and HDFC Capital Builder (Rs106 to Rs.119). All others have still not crossed the December 2007 peaks values.

But during the bear phase, the average midcap scheme has lost 5.2% more than their benchmark. It is more important to understand the performance of a fund when the markets are falling, more so with midcap funds. The CNX midcap fell by -78.58% while the average was -83.76. Many investors lost their years of savings in this period. Except HDFC Capital Builder, Reliance Growth and Birla Sunlife Midcap Fund , all the other midcap funds lost more than their benchmark proving the inherent risk of midcap funds. The corpus of ICICI Emerging Star was reduced to Rs.239 crores from Rs.1245 crores in January 2007. Investors burnt their fingers very badly and would never invest in any mutual fund with their past experience.

The period between June 2004 to December 2007 was a very high growth period and many midcap schemes were started during the period . Markets rallied from peaks to greater peaks. Reliance Growth, Sundaram BNP Paribas Select Midacp

Fund and Birla Midcap were the leaders in that order respectively. Though the benchmark gained 47% in this period, the average of this category was 54%. 2 of these 12 funds gained lesser than CNX midcap. The highest gain was in Sundaram Midcap which gained 65%.

It can be inferred that before and after the crisis when the markets were rising, the returns on most of the funds are better than the CNX Midcap. With a few high beta stocks in the funds' portfolio, the NAV would rise higher than the benchmark and also fall more than the benchmark and the same trend is seen in most of the funds. This could be interpreted as - that the active fund management is not really proving its worth for the investors except a few funds which show a very high performance. Investors have to do their homework before investing in midcap funds.

Although some funds have performed better than their peers, it should not be at the cost of high risk. A risk adjusted measure of performance evaluation would give more insight. For the purpose of this study, Treynor Ratio has been used since midcap funds are diversified and therefore only market risk is the major risk.

b) Risk Adjusted Measures of performance Evaluation - Treynor Ratio

Developed by Jack Treynor, this performance measure evaluates funds on the basis of Treynor's Index. This Index is a ratio of return generated by the fund over and above risk free rate of return (generally taken to be the return on securities backed by the government, as there is no credit risk associated), during a given period and systematic risk associated with it (beta). Treynor's Index (Ti) = (Ri - Rf)/Bi.

$$T_i = \frac{R_i - R_f}{B_i}$$

Where,

Ri represents return on fund,

Rf is risk free rate of return and

Bi is beta of the fund.

All risk-averse investors would like to maximize this value. While a high and positive Treynor's Index shows a superior risk-adjusted performance of a fund, a low and negative Treynor's Index is an indication of unfavorable performance. For a well diversified fund, the Treynor ratio and Sharpe Ratio would generally be similar.

Table 2 gives the Treynor ratio for Indian midcap funds during 2004 to 2010. Between March 2009 and December 2010, HDFC Capital Builder seems to be the top performer by Treynor ratio. UTI midcap and Franklin India Prima Fund are the second and third in that order. The last few funds which are poor performers, SBI Midcap fund, HSBC Midcap and Tata Midcap funds are poor both by returns and Treynor ratio.

The important question to be answered is whether the top performers in terms of returns are also on top as far as risk adjusted performance is concerned. As it can be observed from the above analysis, Sundaram midcap, DBS Chola Midcap, Birla Sunlife midcap fund are the top performers as for returns but not the top as for the risk adjusted returns. This raises a question whether a higher risk gives better returns?

How safe are the midcap fund? To examine this the funds' performance during the market meltdown can be observed. It can be seen that during 2008, the top performers such as Sundaram Midcap Fund, Reliance Growth, Birla Sunlife Midcap fund and HDFC Capital builder were quite successful in containing the losses in 2008 although the risk adjusted returns were not impressive.

It can be observed from Table 2 that the ranking of funds by Treynor ratio is not consistent across all the periods. Further, funds which are ranked high by returns are not impressive as per Treynor ratio. HDFC Capital Builder, L&T Midcap and Reliance Growth seem to perform better than others both by returns and risk adjusted returns over this study period. Sundaram Midcap and Birla Midcap are one in the middle ranks.

Table 2 : Treynor Ratio of Midcap Mutual Funds between 2004-2010

	Jun 04-Dec 07		Jan 08-Feb 09		Mar 09-Dec 10	
	Treynor ratio	Rank	Treynor ratio	Rank	Treynor ratio	Rank
Birla Sun Life Mid Cap Fund	67.87	3	-104.33	7	56.74	9
DBS Chola Midcap Fund	60.09	8	-87.18	1	61.26	6
Franklin India Prima Fund	58.90	9	-109.04	8	63.18	3
HDFC Capital Builder Fund	66.67	5	-102.06	5	78.14	1
HSBC Midcap Equity Fund	68.01	2	-114.82	11	55.91	10
ICICI Prudential Emerging STAR Fund	62.45	7	-110.17	9	62.10	5
Kotak Midcap Fund	58.74	10	-100.33	4	62.25	4
Reliance Growth	63.20	6	-98.32	2	59.90	7
SBI Magnum Midcap Fund	67.82	4	-117.44	12	47.97	12
Sundaram BNP Paribas Midcap	88.88	1	-102.40	6	53.47	11
Tata Midcap Fund	49.56	11	-111.35	10	57.48	8
UTI Mid Cap Fund	40.95	12	-99.66	3	64.90	2

Hypotheses Testing

Hypothesis 1

1. *H0 : There is no difference in returns between Midcap Mutual Funds and CNX Midcap returns*
   H1 : There is difference in returns between Midcap Mutual Funds and CNX Midcap returns

Z test is conducted to test the hypothesis and the Z value is 2.13. If Z value is ≥1.645, null hypothesis is rejected. Therefore the alternate hypothesis is accepted that there is difference in returns between Midcap Mutual Funds and CNX Midcap returns

Hypotheses 2.

1. H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between March 2009 and December 2010 (after the meltdown)

   H1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between March 2009 and December 2010.

The Table 3 below gives the correlation value before the crisis, during the meltdown and after the meltdown.

Table 3 : Correlation value before and after the crisis of 2008

	Mar09-Dec10	Jan08-Feb09	Jun04-Dec07
Correlation value	.702	-.745	-.038
Interpretation	There is relation and it is positive	High negative correlation	Low correlation and it is negative

After the market meltdown, between March 2009 and December 2010, funds that assumed higher risk have better returns as can be seen from the fact that correlation is positive at .702. Therefore the null hypothesis is rejected and alternate hypothesis, that there is a significant relationship between risk and return is accepted.

Hypotheses 3:

H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between January 2008 and February 2009 (during the crisis)

H1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between January 2008 and February 2009.

During the market meltdown, risk and returns are negatively correlated with a value of -0.745 which shows that the relation is negatively correlated. It means that funds that assumed high risk have lower returns. Therefore the null hypothesis is accepted.

Hypothesis 4:

H0 : There is no significant relationship between higher risk and higher returns in midcap mutual funds between June 2004 and December 2007(before the crisis)

H1 : There is a significant relationship between higher risk and higher returns in midcap mutual funds between June 2004 and December 2007.

Even before the crisis, risk and return are negatively correlated and also a low value at -.038 indicating that they are not correlated. It means that there is no relation between high risk and high returns. Therefore the null hypothesis is accepted.

Further the risk and return of all the funds have been ranked for each period. Rank 1 indicates the best performance as far as returns and Rank 12 indicates last with low returns, while a high standard deviation is rank 1 which is not welcome while a standard deviation which is low is Rank 12 and is the best possible. In other words, Rank 1 in returns indicates good performance while rank1 in standard deviation ie. volatility indicates high risk.

Three groups were made out of the 12 selected funds - those funds with returns in the top four ranks in at least two periods, those funds which were always in the last four ie. poor performers and the balance four classified as average performers. The list of midcap schemes have been arranged in the order: the four performers, then the four average performers and lastly the four non performers. The ranks assigned to these funds are also rearranged in the above order and plotted on a graph,

Figure 1 : Risk – Return of midcap schemes between March 2009 - December 2010

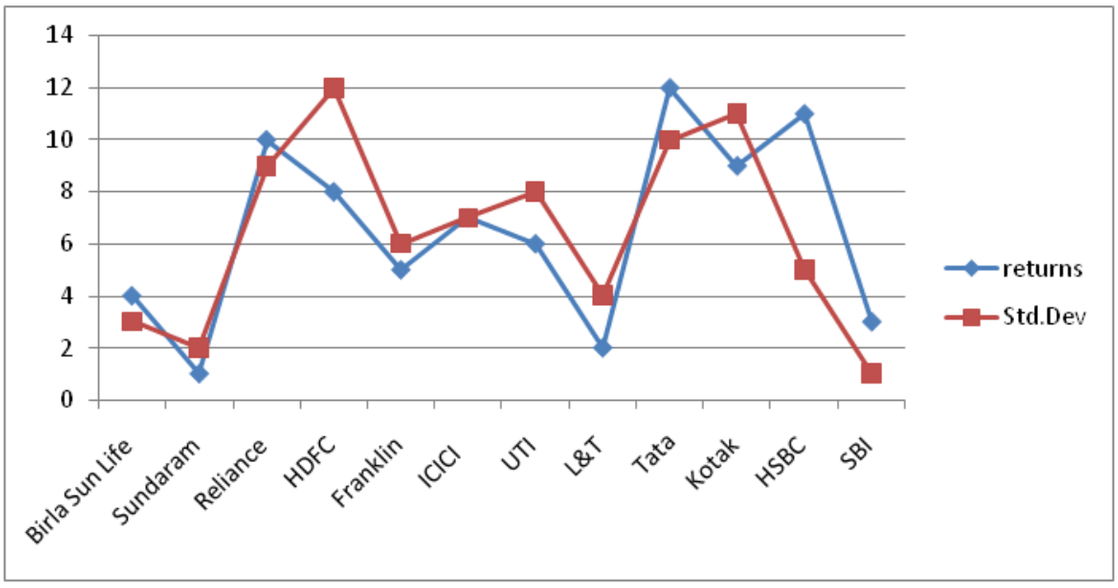


Figure 2 : Risk – Return of midcap schemes between January 2008 - February 2009

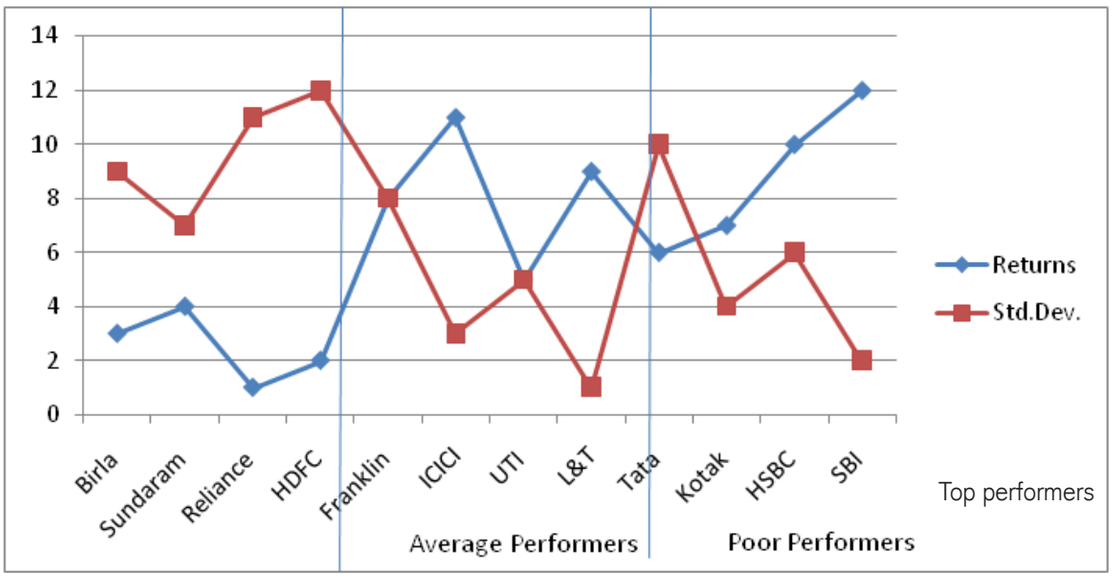
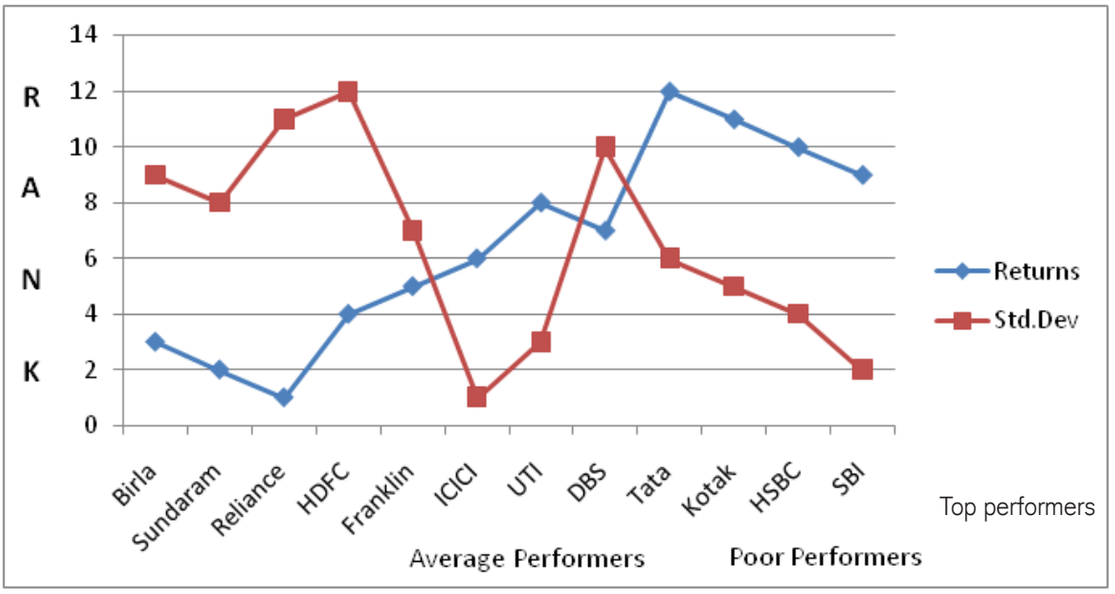


Figure 3 : Risk – Return of midcap schemes between June 2004 - December 2007



graph for each period. It can be well observed how the performers and non performers stand as for risk-return.

From the graph 1, we can observe that the ranking of risk and return go almost together. This is a period of stock market revival period. Those funds taking more risk seem to make more returns while in figure 2 and 3, it can be observed that the performers have the last ranks for risk as measured by standard deviation and the lower ranks for returns while it is the reverse for poor performers.

An analysis of the graphs above gives a very interesting insight. The top four funds Birla Sunlife midcap, Sundaram micap, Reliance Growth and HDFC Capital builder have given top returns and therefore ranked highest in one to four ranks in most of the periods, the exception being after the crisis when Reliance and HDFC Capital builder are not in the top four. It can be observed that the standard deviation line of these top funds are high above because they are ranked in the last few and therefore least risky. When we observe the poor performers whose returns are below the benchmark returns and therefore are ranked the last few, the returns are low while the standard deviation line of these funds are in the low levels meaning they rank high on standard deviation(volatility) but returns are poor. It is a mixed position as far as the average performers are concerned.

This also indicates that the top funds are consistently good at delivering returns while low on risk and non performers are always the last as far as returns but high on standard deviation and the average performers are not consistent. So an investor cannot depend on these funds.

Summary

Midcap funds are risky funds as compared to large cap funds due to their higher volatility. Mid cap stocks are usually associated with high risk and high returns due to their ability to generate superior returns in a bull market and tend to underperform in a falling market. As investors, the first concern is not to lose the initial money invested. At least the benchmark returns should be generated by the fund manager for the investor to stay put in a particular fund.

When the markets were rising, the returns on most of the funds are better than the CNX Midcap. With probably a few high beta stocks in the funds' portfolio, the NAV has risen higher than the benchmark and also fall more than the benchmark and the same trend is seen in most of the funds. This could be understood as that the active fund management is not really proving its worth for the investors except a few funds which show a very high performance. Investors have to do their homework before investing in midcap funds.

During the bull run starting March 2009, all the funds out of 12 funds that has been analysed have performed better than the CNX benchmark. Sundaram Midcap fund, Birla sunlife midcap and Reliance Growth are the only three funds which have done during both the phases and it is a mixed bag for most of the funds. But the Sharpe ratio of these three funds is not the best but only in the average. HDFC Capital builder seems to rank better on a risk adjusted basis though not top on returns Tata midcap, Kotak midcap and SBI Midcap are below par and need some more time before they can prove themselves. The category as such has generated 40% growth annually by Sundaram midcap while the least is 10% by Tata midcap. So an investor has to be cautious while investing.

To conclude, investors inspite of willing to take risk and being prepared to invest in midcap funds, should invest only in the top four funds Reliance Growth, Sundaram Select Midcap,Birla Sunlife Midcap and HDFC Capital Builder to be sure to tide over different market scenarios.

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An empirical study of the role and probable use of Human Intellectual Capital with special reference to Thought Leaders as a Brand leveraging tool for marketing of Consulting Services

Sunita Joshi[1], AparnaTembulkar[2]

Abstract

The fiercely competitive era today has led to Organizations moving ahead in the pursuit of knowledge to be able to better satisfy their Customers. This has lead to a renewed impetus on more innovations, and more enterprising efforts on the part of organizations.

The various branches of knowledge that are coming forth because of these efforts must not only be acknowledged but also shared and further researched for the greater benefit of all stakeholders.
It is in this context that knowledge management and the use of Intellectual Property Rights for protection of this knowledge becomes imperative.

Knowledge management (KM) comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. It is the process of transforming information and intellectual assets into enduring value.

Stewart (1997) defines Intellectual Capital as "the intellectual material – knowledge, information, intellectual property that can be put to use to create wealth."

Intellectual Capital is the knowledge that can be converted into value. This definition encompasses inventions, ideas, general know-how, design approaches, computer programs, processes and publications.
However, a general observation reveals that many organizations today, are still unaware of the Intellectual property Rights and hence are unable to protect their Intellectual Capital.

This working paper aims at finding out the processes that organizations (small scale industries) adopt for transformation of information and intellectual assets into enduring and sustaining value.

The researchers will conduct a study of few selected small scale units in the manufacturing sector in Pune city, in India and gather information on the systems and processes that are in place for identifying, sharing and protecting of the knowledge.

An empirical study of the role and probable use of Human Intellectual Capital with special reference to Thought Leaders as a Brand leveraging tool for marketing of Consulting Services

Introduction

Today we live in the era of Knowledge. Knowledge based on information and communication is the corner stone for the success of an organization. Organizations today value knowledge as an intangible asset that can be used to excel in their respective areas and hence it is observed that, it is without exception that most organizations today are in the pursuit of knowledge.

Knowledge here encompasses all its possible facets like Intellectual Resources, Patents, Trademarks, Knowledge Workers, their skills capabilities, Thought Leaders their contributions to the organization and a host of other intangible assets which are grouped as Intellectual Capital.

Intellectual Capital is defined as the Intellectual material – Knowledge, information, intellectual property that can be put to use to create wealth. – Stewart (1997). In other words it is the knowledge converted into value

Intellectual Capital is a significant contributor to the development of organizations and the Thought Leader is an important

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link in the value chain of Intellectual Capital. The Thought Leaders recognize that the knowledge economy has given rise to a new ecology of competition, in which intellectual assets rather than physical assets are the principal wellspring of company wealth and competitive advantage. Of critical importance in this scenario is that companies ensure that they protect and leverage

whatever it is that adds the most value to their business and whatever represents the most vital source of their competitive advantage.

The proper leveraging and utilization of the Intellectual capital ultimately focuses on superior Business performance .The role of Intellectual Capital is even more prominent in organizations that are into knowledge services, like consulting organizations, technology solutions providers, law firms etc, mainly because of the nature of the service that they offer.

It is in this that the Thought leader has a significant role to play. The Thought leader is an individual directing the activities of a group towards a shared goal and who in doing so helps the organization to realize its potential to the maximum limit and achieve success.

Looking at the Thought Leader from a different perspective, it can be said that the Thought Leader helps in leveraging the Intellectual Capital while being a part of it as well.

The American Marketing Association defines a brand as a name, term, sign, symbol or design or a combination of them intended to identify the goods or services of one seller or a group of sellers and to differentiate those from those of the competitors.

Given the above definition and the fact that, more often than not, it is the thought

leader's name, his skills and his expertise, that draws a client towards an organization, we can say that it is the Thought leader who in himself represents a brand building tool for the consulting organization.

Need for the Study

Given the above introduction, we felt that it was essential to study the relationship between the Thought Leader, his role as a part of the intellectual capital of the organization and his contribution to development of the Intellectual capital in a consulting organization.

Further we also felt that the thought leader being the prime mover of intellectual capital is the basis for differentiating the Organization from that of its competitors. As such we felt the need to study this aspect and how this lead to the Thought leader being a Brand Ambassador for the consulting organization

Objectives of the Study

In view of the above the following objectives have been decided:

1. To study the importance of a Thought leader as a part of the Intellectual Capital of a consulting organization
2. To understand the significance of the role of a thought leader in a consulting organization for building the Intellectual capital in the Consulting Organization
3. To study the role of the Thought leader as a basis of differentiation and as a brand ambassador for the Consulting organization

Hypotheses

In line with the above objectives the following hypotheses were formulated

H1. The Thought leader plays a very vital role and is the prime mover of the intellectual capital which ensures growth of the consulting organization

H2. The Thought Leader himself represents a brand building tool for the organization and works as a Brand Ambassador for the consulting organization

H3. The Thought Leader can becomes a part of the Unique selling proposition and provides the necessary competitive advantage to the consulting organization

Research Methodology:

Data Collection - The study has been conducted using both Primary and secondary data.

Primary data – Primary data was collected by visiting several consultants. A sample size of 51 consultants in various consulting organizations in the fields like finance, marketing, and human resource management, in and around Pune was selected for the study.

Secondary Data – Secondary data included various sources like Indian and International research papers in the field of Intellectual capital and strategic leadership. The major sources of literature included the Intellectual Capital Journal and Harvard Business Review journals.

Research Instrument - The respondents were interviewed with the help of a Structured

Questionnaire.

Design of the Questionnaire

We designed the questionnaire to collect information about the role of intellectual capital in the organization, the impact of intellectual capital on the overall growth of the organization and the contribution of Thought Leaders to the organization.

The questionnaire was pre-tested, modified and then used further.

We asked the respondents to answer the questions on a 10 point scale. This helped in quantitative analysis of the data. By rating 1, we mean strongly disagree, not important,least preferred and lowest, and by 10 we mean strongly agree, very important, and most preferred. The score in between 1 and 10 indicates appropriate level of agreement.

Sampling Design

Sampling Technique -Data was collected using the non-probability sampling technique *Sampling Method* – The sampling method used was the purposive sampling method *Sample Size*- As we have used the 10 point scale , in order to achieve +/- 0.5 accuracy with 95% confidence, a sample size of 36 is considered adequate. However, we anticipated that there would be some data loss and hence decided on a sample size of 51

Sample Distribution

TABLE 1: The following table shows the category-wise distribution of selected units among different types of organizations

Type of organization	Number of Units Selected	Percentage (rounded to nearest decimal)
1. Multinationals	4	8
2. Public Limited	4	8
3. Private Limited	10	20
4. Partnership Firms	10	20
5. Proprietary Firms	10	20
6. Academic Institutions a. National Research Institutes b. Universities c. Other Specialized Institutes	 4 4 5	 8 8 10

Hypotheses Testing

The hypotheses to be judged as a part of this study are in the form of measurement of significant difference between means of two groups. For this the responding population needs to be split into two groups. The sample size is then to be chosen such that a specified level of difference between the averages will be significant at 95% confidence level. Since it is a comparison between two groups the t-Test has been used. **Demarcation between two groups** – We have used the simple approach of using 'median' as the demarcation line for dividing the sample into two groups for testing of hypothesis. This method helps us in getting two equal groups across parameters, which is relevant for testing hypothesis and it also reflects the population distribution. It is also practical as it does not require specification of the sample in advance.

We have demarcated the group by the following criteria for testing various hypothesis *Age of the Respondents* – Depending upon the age of respondents, they were divided into two groups

i) Age less than 55 years ii) Age more than 55 years

Qualification of the respondents – Depending upon the academic qualification, the respondents are divided into two groups

i) Professionals like chartered accountants, cost accountants, lawyers, engineers and

ii) The other groups being classified as Non-Professionals

Age of the organization – Depending upon the establishment of the Organizations, they were divided into two groups

i) Organizations that were established before 1995 ii) Organizations that were established after 1995

Computing the standard error – We have presented the worst case scenario for standard error. Since we have used the 10 point scale for measurement, it automatically means that under the worst case scenario of maximum standard error, the six times standard error will be 1.5. As such we have erred on the conservative side

Data Analysis and Interpretation

Hypothesis 1

H1. The Thought leader plays a very vital role and is the prime mover of the intellectual capital which ensures growth of the consulting organization *Explanation* - A thought leader is always the one who has the ability to think out-of-the- box even in the toughest situations. When executives in an organization to meet the changing needs of the customer use creativity and innovation, they are considered as the best strategic tools for gaining a competitive edge in the market and the organization as a whole is seen as a Thought Leader

TABLE 2

Level of agreement regarding Role of Thought Leader in Consulting Organization	
Role of Thought Leader	**Weightage**
Knowledge of the Thought Leader is responsible for the growth of the organization	7.9
Thought Leader is essential leadership to our employees	7.7
Experience of the Thought Leader is responsible for the growth of the organization	7.5
Average	7.5

Interpretation

As we can see from the above table, the respondents have given an average weightage of 7.5. On the basis of this we can say that:

1. Organizations feel that it is the thought leader who leads the organization in difficult times overcoming all the difficulties and leading to the path of success. Every organization's success story backed by the vision, experience and knowledge of its thought leader.
2. Our survey shows that a thought leader with experience, knowledge and expertise can bring about the desirable change with new ideas. He is the prime mover in evolving strategies for growth as well as sustainability of the profitability

TABLE 2.1

Level of agreement regarding Role of Thought Leader in Consulting Organization: The age of the respondent divide				
Role of Thought Leader	**Age of Respondent**		**Difference**	**Is difference significant?**
	Less Than 55	**More than 55**		
Knowledge of the Thought Leader is responsible for the growth of the organization	7.9	8.2	0.3	No
Thought Leader is essential leadership to our employees	8	8.4	0.4	No
Experience of the Thought Leader is responsible for the growth of the organization	7.5	7.8	0.3	No
Average	7.8	8.1	0.3	No

Interpretation: All the respondents have unanimously agreed that the knowledge of the thought leader is responsible for the growth of the organization and that thought leader provides essential leadership to the organization.

TABLE 2.2

Level of agreement regarding Role of Thought Leader in Consulting Organization: The Qualification Divide				
Role of Thought Leader	**Qualification**		**Difference**	**Is difference significant?**
	Professional	**Non Professional**		
Knowledge of the Thought Leader is responsible for the growth of the organization	8.1	8.1	0.0	No
Thought Leader is essential leadership to our employees	7.7	8.7	1.0	Yes
Experience of the Thought Leader is responsible for the growth of the organization	7.8	7.6	0.2	No
Average	7.8	8.1	0.3	No

*Interpretation: T*he survey shows that the non-professionals feel that The Leadership provided by thought leaders is more important to the organization. However on all other

aspects there seems to be unanimous agreement.

TABLE 2.3

Level of agreement regarding Role of Thought Leader in Consulting Organization: The Age of the Organization divide				
Role of Thought Leader	**Age of the organization**		**Difference**	**Is difference significant?**
	Before 1995	**After 1995**		
Knowledge of the Thought Leader is responsible for the growth of the organization	8.0	8.2	0.2	No
Thought Leader is essential leadership to our employees	8.2	8.2	0.0	No
Experience of the Thought Leader is responsible for the growth of the organization	7.6	7.8	0.2	No
Average	7.9	8.0	0.1	No

Interpretation: All the respondents irrespective of the age of the organization, have unanimously agreed that the knowledge of the thought leader is responsible for the growth of the organization and that thought leader provides essential leadership to the organization

Hence from all the tables (2, 2.1, 2.2 and 2.3) above we can say that the hypothesis - H1: The Thought leader plays a very vital role and is the prime mover of the intellectual capital which ensures growth of the consulting organization - is proved

Hypothesis 2

H2. The Thought Leader himself represents a brand building tool for the organization and works as a Brand Ambassador for the consulting organization

Explanation - Many organizations are in fact known by their Thought Leaders and the contributions made by these leaders. Clients prefer organizations that have Thought Leaders leading them because of their innovative ideas and assured solutions to their problems and very often it is seen that the Thought leader himself becomes a hall mark or brand building tool for the organization

A brand is something that is intended to identify the goods or services of one seller or a group of sellers and to differentiate those from that of the competitors and in this competitive age, a good brand name definitely translates into more business and better profits among other advantages. It is also a known fact that, more often than not it is the thought leader's name, his skills and his expertise that draws a client towards an organization. The same has been revealed through our study

TABLE 3

Level of agreement regarding the role of Thought Leader as a Brand Ambassador for the Consulting Organization	
Role of Thought Leader	**Weightage**
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.6
Organization is known by his/her name	7.5
Educational qualification of the Thought Leader is responsible for the growth of the organization	6.7
Average	7.2

Interpretation

As depicted above, the respondents have given an average weightage of 7.2 for the above hypothesis. Hence we can infer that

1. Thought Leader as an individual contributes not only to the development of the Intellectual capital but also is a base for differentiation for the organization.
2. The Organization is very often known by the name of the Thought Leader and the
3. Thought leader himself becomes a Brand Ambassador for the Organization and the individual capabilities, skill sets and qualifications of the Thought Leaders certainly have a bearing on the growth of the organization.

TABLE 3.1

Level of agreement regarding Role of Thought Leader in Consulting Organization: The age of the respondent divide				
Role of Thought Leader	**Age of Respondent**		**Difference**	**Is difference significant?**
	Less than 55	**More than 55**		
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.8	8.0	0.2	No
Organization is known by his/her name	7.4	8.0	0.6	Yes
Educational qualification of the Thought Leader is responsible for the growth of the organization	6.8	6.9	0.1	No
Average	7.3	7.6	0.3	No

Interpretation: Irrespective of the age of the respondent all the respondents agreed that The Thought Leader himself represents a brand building tool for the organization

and works as a Brand Ambassador for the consulting organization.

TABLE 3.2

Level of agreement regarding Role of Thought Leader in Consulting Organization: The Qualification divide				
Role of Thought Leader	**Qualification**		**Difference**	**Is difference significant?**
	Professional	**Non Professional**		
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.8	8.1	0.3	No
Organization is known by his/her name	7.6	7.7	0.1	No
Educational qualification of the Thought Leader is responsible for the growth of the organization	7.0	6.7	0.3	No
Average	7.4	7.5	0.1	No

Interpretation: Irrespective of the qualification divide, all respondents agree that the thought leader himself represents a brand building tool for the organization and works as a Brand Ambassador for the consulting organization.

TABLE 3.3

Level of agreement regarding Role of Thought Leader in Consulting Organization: The age of the organization divide				
Role of Thought Leader	**Age of the organization**		**Difference**	**Is difference significant?**
	Before 1995	**After 1995**		
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.7	8.1	0.4	No
Organization is known by his/her name	7.8	7.5	0.3	No
Educational qualification of the Thought Leader is responsible for the growth of the organization	7.0	6.6	0.4	No
Average	7.5	7.4	0.1	No

Interpretation: Again we can infer that irrespective of the age of the organization all respondents agree that the thought leader himself represents a brand building tool for the organization and works as a Brand Ambassador for the consulting organization.

As such from all the tables above (3,3.1,3.2, and 3.3) we can say that hypothesis – H2- The Thought Leader himself represents a brand building tool for the organization and works as a Brand Ambassador for the consulting organization - is proved

Hypothesis 3

H3. The Thought Leader can becomes a part of the Unique selling proposition and provides the necessary competitive advantage to an organization

Explanation - A Thought Leader is a futurist or a person who is recognized among peers and mentors for innovative ideas and demonstrates the confidence to promote or share those ideas as actionable distilled insights (thinklets). With his innovative ideas and experience, he will be able to formulate, implement and evaluate cross-functional decisions that will enable an organization to achieve its objectives.

What differentiates a Thought Leader from any others is the recognition from the outside world that the company, headed by the Thought Leader, deeply understands its business, the needs of its customers, and the broader marketplace in which it operates. In short, he is the one who evolves the Unique Selling Proposition of the organization, which is beneficial to all the stakeholders. Thought leaders are not only a part of Human and Intellectual Capital but also a unique and invaluable asset that often becomes a Unique Selling Proposition for the organization.

TABLE 4

Level of agreement regarding the role of a Thought leader as a Unique Selling Proposition for the Consulting Organization	
Role of Thought Leader	**Weightage**
Knowledge of the Thought Leader is responsible for the growth of the organization	7.9
Thought Leader is essential leadership to our employees	7.7
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.6
Organization is known by his/her name	7.5
Experience of the Thought Leader is responsible for the growth of the organization	7.5
Educational qualification of the Thought Leader is responsible for the growth of the organization	6.7
Average	7.5

Interpretation

1. From the study that we conducted for fulfilling the objective of evaluating the role of intellectual Thought Leader, we are of the of the opinion that as the problems faced by the organizations are unique, they need unique solutions to solve them.

   Organizations become successful only when the Thought Leader is capable of solving these problems with his new unique ideas and innovations. Such Thought Leaders become irreplaceable assets-intellectual capital for an organization responsible for overall growth of the organization.

2. For effective working Thought Leaders always share responsibility for leading and managing business units. They always share ideas and information with others to achieve goals. Thought Leaders give direction and training whenever necessary, encourage learning to develop Intellectual Capital.

TABLE 4.1

Level of agreement regarding Role of Thought Leader in Consulting Organization: The age of the respondent divide				
Role of Thought Leader	**Age of Respondent**		**Difference**	**Is difference significant?**
	Less than 55	**More than 55**		
Knowledge of the Thought Leader is responsible for the growth of the organization	7.9	8.2	0.3	No
Thought Leader is essential leadership to our employees	8.0	8.4	0.4	No
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.8	8.0	0.2	No
Organization is known by his/her name	7.4	8.0	0.6	Yes
Experience of the Thought Leader is responsible for the growth of the organization	7.5	7.8	0.3	No
Educational qualification of the Thought Leader is responsible for the growth of the organization	6.8	6.9	0.1	No
Average	7.3	7.7	0.4	No

Interpretation: All respondents unanimously agree that the Thought Leader in himself represents a unique selling proposition for the Consulting Organization

TABLE 4.2

Level of agreement regarding the role of a Thought leader as a Unique Selling Proposition for the Consulting Organization – The Qualification Divide				
Role of Thought Leader	**Qualification**		**Difference**	**Is difference significant?**
	Professional	**Non Professional**		
Knowledge of the Thought Leader is responsible for the growth of the organization	8.1	8.1	0.0	No
Thought Leader is essential leadership to our employees	7.7	8.7	1.0	Yes
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.8	8.1	0.3	No
Organization is known by his/her name	7.6	7.7	0.1	No
Experience of the Thought Leader is responsible for the growth of the organization	7.8	7.6	0.2	No
Educational qualification of the Thought Leader is responsible for the growth of the organization	7.0	6.7	0.3	No
Average	7.6	7.3	0.3	No

Interpretation: All respondents unanimously agree that the Thought Leader in himself represents a unique selling proposition for the Consulting Organization

TABLE 4.3

Level of agreement regarding the role of a Thought leader as a Unique Selling Proposition for the Consulting Organization – The Age of the Organization Divide				
Role of Thought Leader	**Age of the organization**		**Difference**	**Is difference significant?**
	Before 1995	**After 1995**		
Knowledge of the Thought Leader is responsible for the growth of the organization	8.0	8.2	0.2	No
Thought Leader is essential leadership to our employees	8.2	8.2	0.0	No
Charismatic personality and positive attitude of the Thought Leader are key factors for motivating and retaining employees	7.7	8.1	0.4	No
Organization is known by his/her name	7.6	7.7	0.1	No
Experience of the Thought Leader is responsible for the growth of the organization	7.8	7.8	0.2	No
Educational qualification of the Thought Leader is responsible for the growth of the organization	7.0	6.6	0.5	No
Average	7.7	7.3	0.4	No

Interpretation: All respondents unanimously agree that the Thought Leader in himself represents a unique selling proposition for the Consulting Organization irrespective of the Age of the organization divide. On the basis of the tables above (4, 4.1, 4.2 and 4.3) we can say that Hypothesis - H3 The Thought Leader can becomes a part of the Unique selling proposition and provides the necessary competitive advantage to an organization – is accepted.

Conclusion:

On the basis of the study that we conducted, and the major findings, we can conclude that,

1. A Thought Leader is a futuristic person, a kind of a visionary. He is recognized among peers for his innovative ideas and workable solutions. As such he is the prime mover of intellectual capital, which ensures growth of the organization.
2. Organizations feel that it is the Thought Leader who leads the Organization in difficult times overcoming all obstacles and leading to a path of success. Every Organizations success story is backed by the vision, experience and knowledge of its thought leader.
3. The ideas and innovations that a Thought Leader brings to his workplace, become a part of the Intellectual property of the organization and the Thought Leader himself becomes a Brand Ambassador for the organization.

The significant findings of our study are corroborated by John Bliss and Meg Wildrick who state that "to demonstrate this expertise, senior consultants must be, first and foremost thought leaders. They must spend time synthesizing big ideas – industry trends, market needs, innovate concepts - and discussing their implications."

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Balancing the Quality Assurance and the Quantitative Growth in Higher Education in India

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Abstract

Globalization has opened doors for tremendous opportunities for the youth across the world. With its huge pool of human resource in the field of commerce, science, technology and other allied areas, India is gaining importance in the global market. To avail this opportunity, there has been a rapid increase in the number of professional as well as higher educational institutes in India. This has led to the accessibility of higher education to the masses especially the youth in the age group of 17-23 years . The number of colleges has phenomenally increased from around 700 to 26,000 approximately and the number of universities has increased from around 20 to 500 approximately over a period of 60 years since independence. Of the existing educational institutes, only about 30% of the universities and 10% of the colleges are accredited by NAAC. Hence, there is an urge to have a proper blend of quality and quantity in higher education.

It has, therefore, become important to improve upon the quality of education. To evaluate the education quality, there are various quality assessment organizations like NAAC which have set certain benchmarks for the quality assessment. The criteria set by the assessing bodies act as a main driving force in enhancing the quality. This paper studies NAAC benchmarks and, thereby, helps in understanding the gaps in pursuit of balancing the qualitative and quantitative growth in higher education .The paper concludes that meeting the criteria set by the accreditation organizations and a combination of conventional and innovative practices helps us to develop the attitude towards continuous enhancement of education quality in higher and professional education.

Introduction

Globalization has opened doors for tremendous opportunities for the youth across the world. With its huge pool of human resource in the field of commerce, science, technology and other allied areas, India is gaining importance in the global market. To avail this opportunity, there has been a rapid increase in the number of professional as well as higher educational institutes in India over the last 60-65 years. The growth is really remarkable considering the huge size of our country and the diversity of religions, cultures and the socio-economic strata of its people. The following figures amply speak about this phenomenal growth.

	1947	**2009**
Number of universities	20	450
Number of colleges	700	25,000
Number of students	1,00,000	1,25,00,000
Number of teachers	15,000	6,00,000

This has led to the accessibility of higher education to the masses especially the youth in the age group of 17-23 years The higher education has reached all parts of our country from cities to towns and even many villages. In this pursuit of rapid quantitative growth of higher education, the quality of education, unknowingly or knowingly, got neglected. As a result, there has been sharp decline in the higher education quality. Of the existing educational institutes, only about 30% of the universities and 10% of the colleges are accredited. Hence, there is an urge to have a proper blend of quality and quantity in higher education.

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In the pre-independence period, the quality of education was never in doubt or challenged by the stakeholders of education or the society at large. In universities and colleges, there were many great scholars in their respective disciplines and teachers were highly dedicated. However, there seems to be a wide-spread feeling among all concerned for the last 2-3 decades that the quality of education has considerably deteriorated.

Establishment of NAAC and Its Role in the Quality Movement:

In view of 'Quality Crisis' in higher education and the urgency of dealing with it at the national level, *National Assessment and Accreditation Council (NAAC)* was established in 1994 by UGC, New Delhi. The Head Office of NAAC is at Bangalore. With the mission of promoting the educational quality throughout India, NAAC works as a National Body for academic assessment and accreditation of colleges, universities and other institutes in India. It guides and supports the educational institutes in their initiatives and efforts for the improvement of quality of education imparted.

NAAC Methodology of Quality Assessment:

After the establishment of NAAC, there has been a significant rise in the number of colleges and universities which have undergone the NAAC process of academic assessment and accreditation. This number is continuously rising every year. Since the period of validity of NAAC accreditation is only 5 years, many colleges and universities are now in the process of reaccreditation and quite a few have already gone through this process.

The criteria used by NAAC for academic assessment and accreditation are:

Curricular Aspects

Teaching-Learning and Evaluation

Research, Consultancy and Extension

Infrastructure and Learning Resources

Student Support and Progression

Governance and Leadership

Innovative Practices

On invitation from the institute, the NAAC Peer team visits the concerned institute for a period of 2-3 days depending upon the size of the institute and the scope of activities. Marks are given to each criterion after careful consideration and verification of the information given in the *Self Study Report* submitted by the institute. The grade to be awarded is decided upon the composite score of the institute. The same is awarded to the institute by NAAC after the submission of the Peer Committee Visit Report to NAAC and its approval.

NAAC awards grades like A,B,C,D with 'A' being the highest grade. It is to be noted that the grade of the institute which does not come up to the minimum expected level of educational quality is 'D'. However, in such case the accreditation status of the institute is treated as 'Not Accredited'. Such institute can approach NAAC again after a period of two years.

Quality-Quantity Management - A Great Challenge:

The quality management has become a difficult task because of the rapid and uncontrolled quantitative growth of higher education in India .For creating a huge pool of highly competent scientific and technical manpower, providing access to at least 20% of the eligible youth in the age group of 17-23 years by 2020 is necessary. Therefore, our task is two-fold:

Management of Quality which is showing downward trend and

Management of 'Quantity' of educational institutes.

Let us address the quality issue first.

What is Quality?

For effective management of educational quality, it is necessary to understand the meaning of quality in general and quality of education in particular.

Some of the widely accepted definitions are given below:

Quality is 'value for money'

Quality is 'achieving the desired benchmarks'

Quality is efficiency, effectiveness and excellence

1.Quality of Education:

All the definitions of quality given above apply to education as well. But none of the above definitions is complete. Quality of education is not just the 'value for money' or the 'customer satisfaction' or 'the fitness of purpose', but is the cumulative effect of the efforts of all involved in the process, directly or indirectly.

We may, therefore, define the quality of education as under:

Quality of education is the level of satisfaction of all the stakeholders of education connected with a particular institute.

The objective of the NAAC process of academic assessment and accreditation is to measure this satisfaction level.

2. Management of Quality of Education:

Maintenance of quality and its enhancement is a collective responsibility of all concerned. Therefore, serious efforts need to be constantly made at two levels:

i) the institutions

and ii) the government.

a) Efforts at the institute level:

Every institute must have a short-term or long-term Action Plan prepared by the Head of the institute. The Head of the institute should be the leader of the Quality Movement in the institute. He/She should take the Quality Movement to all concerned by organizing Seminars, lectures etc.

Every institute should follow the guidelines of NAAC for quality improvement.

Criteria-wise Suggestions for Quality Improvement:

Some suggestions regarding the efforts to be taken at the institute level are given below.

b) Curricular Aspects:

Curricula should be reviewed periodically to be in tune with the recent advances in the respective disciplines. IT should include Interdisciplinary Courses and should be based on the needs of the local community and industries. Emphasis should be givens on the development of 'problem-solving' ability and 'practical skills' of the students

c) Teaching-Learning and Evaluation:

a) Teaching-Learning:

For quality education, teachers should be highly qualified. Necessary concessions/facilities like faculty improvement programs , academic collaboration, co-curricular activities should be extended to teachers to avail the academic benefits .

b) Evaluation:

New methods of student evaluation like group discussions, tutorials, online tests, etc., should be employed along with the conventional methods.

3. Research, Consultancy and Extension:

a) Research and Consultancy:

The Head of the institute should encourage teachers to raise their academic qualifications (like *M.Phil, Ph.D., etc*), to conduct research in the institute itself (like *undertaking Minor/Major Research Projects of UGC, DST, ISRO etc* or elsewhere) and also do consultancy services (*to the industries, entrepreneurs, business persons etc*)**.,**

b) Extension Activities:

Extension activities involving students can be conducted through NSS, Nature Clubs, Subject Associations. *The Projects of the Public Bodies like* measurement of water, air pollution, *Slum development program, etc., may be undertaken by the institutes***.**

4. Infrastructure Development and Learning Resources:

Constant efforts should be taken for the development of infrastructure and learning resource such as Construction of class-rooms and laboratories, hostels, sports facilities, canteen, vehicles stand, etc.,The efforts should be taken to keep the campus 'Clean, Green and Beautiful'.

5. Student Support and Progression:

Various counseling Cells for personal counseling, academic counseling, career and placement can be used to guide the students for their overall personality development. Financial Assistance to the needy students can be given through Scholarships, *Endowments,* Adoption of needy and deserving students for their educational expenses by past students, well wishers, etc.,

6. Governance and Leadership:

Good governance in all academic and administrative activities is very essential. This can be achieved by delegating the responsibilities to the various committees. The guidelines of the NAAC regarding formation of committees should be strictly followed. The quality will be high if the academic administration is efficient which can be achieved by office automation, 'Online' admissions, examinations, etc.

7. Innovative Practices:

Every institute may have some practices/programs which are innovative or unique in nature like women empowerment programs, disaster management, consultancy services centre, etc.,These practices may contribute to the student's personality development or the welfare of the community in the region.

a) Efforts on Quality Management at the Government Level:

The Government of India through its appropriate Departments and Bodies should take decisions quickly on important issues of concern in higher education. Pending issues should be settled quickly. Some issues are given below:

1. Permission to Foreign Universities for Education Activities in India.

2. Mono-Discipline and small Universities.

3. Sharing the mechanism and expertise on Assessment of Quality in Education, with other countries.

b) ICT - enabled e-education:

The era of e-education has already begun in India. The cost of e-education is much less as compared to the traditional method. The e-education technology will involve participation of the government as well as the private education providers. It will enable us to give education to *anyone, anywhere and anytime* and thus achieve the *mass personalization* of higher education. In fact, the *Gandhian philosophy* of '*More from Less for More'* can be promoted on a large scale through ICT.

Management of Quantitative Growth of Higher Education:

The rapid growth of higher education in the last 25-30 years has been without planning and the national or state level control. Consequently, there was mushroom growth of new educational institutes of all kinds good as well as bad during this period. However, it is necessary to continue with this growth but making sure that the quality of education is not adversely affected in the process.

The challenge before the higher education system is how to achieve the desired quantitative growth maintaining high quality of education. Some measures to be taken at the national/state level are given below:

Perspective Plan of Action for Higher Education Growth should be prepared.

Funding for Higher Education should be increased substantially.

The nation-wide network of the Central Open University(IGNOU) should be expanded to reach all parts of the country. The same applies to the state open universities also.

The States which have not established their own 'Open' Universities should do so without further delay.

The Central Government should act fast on permitting foreign university of high international reputation to start their educational activities.

The network of Central Universities/Distance education centres should be further expanded.

Concept of 'small' universities viz. City universities/District universities should be Implemented. Private higher education be allowed to grow, but under the norms and conditions laid down by the respective State Governments.

It should be ensured that :

i) The fee structures for such institutes run on 'no government grant basis' are well regulated through the Government Bodies.

ii) There is no monetary exploitation of students.

iii) The financial concessions are provided to the socially and economically backward students so as to provide them easy access for higher education.

'Community Colleges' should be started on experimental basis.

Evening Colleges should be started on a larger scale using the existing infrastructure of the colleges.

It has, therefore, become important to improve upon the quality of education. To evaluate the education quality, there are various quality assessment organizations like NAAC which have set certain benchmarks for the quality assessment. Meeting the criteria set by the accreditation organizations and a combination of conventional and innovative practices helps us to develop the attitude towards continuous enhancement of education quality in higher and professional education. If we make sincere efforts, take right steps for high quality education, we shall then be able to overcome the quality-quantity crisis that we are currently facing and make our country a major intellectual and economic power in the world in the near future.

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Environmental Management Education-the stakeholder interest.

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Abstract

Environmental Management education as a part of the MBA curriculum or as a stand-alone course at management institutions had been encouraged by the judgment to the Supreme Court of India and the Government of India. Initiatives taken on this subject so far are a few and even among these few there appears to be a realization that a course exclusively on environmental management at the post-graduate level in management institutions is not viable. In this paper the authors describe their experience in conducting the post-graduate diploma in environmental management at IndSearch, Pune, India, for the last nine years (2001- 2009) and draw inferences on the interest of various stakeholders in such courses and on the viability of such a course in the long run

Introduction

Recognizing the importance of environmental management for future managers, IndSearch took the initiative to introduce the subject of Environmental Management as a part of Management education in 1997. The subject was however offered as an "Add On" course as curriculum development/revision under the University system takes time and it was not possible to introduce this subject as a part of the "regular" curriculum at a short notice. Simultaneously, the Institute took up with the University of Pune for the introduction of a two year part time Post Graduate Diploma in Environmental Management (PGDEM) and prepared the necessary curriculum. The University approved the course from the academic year 2001-2002. In this paper, we present a brief account of our journey from 1997 to 2009 to popularize environmental management in management curriculum and our assessment of the PGDEM course in terms of student interest, institutional interest and industry interest.

History

Various milestones in our journey towards popularizing environmental management in the post- graduate management education startingfrom1997 to 2009 are given in table 1.

TABLE 1: Environmental Management Education in IndSearch

1996	First Discussions on Environmental Management Research
1997	Add-on courses on Environmental Management to Post-Graduate Management students; Department of Environmental Management established in IndSearch
2000	Development of the curriculum for PGDEM of the University of Pune
2001	Commencement of two years part-time evening PGDEM course
2003	First Public Awareness Lecture Series (PALS) started
2004	Workshop on Environmental Accounting and Reporting supported by AICTE, New Delhi
2007	IndSearch was conferred the Autonomous Status by the UGC and the University of Pune in concurrence with the Government of Maharashtra CSR as a subject made mandatory for the post graduate diploma students; CSR as an elective subjective for MBA students
2007	School of Sustainability Studies established ; PGDEM made one year course with a changed syllabus
2009	IndSearch Centre of Sustainability Management (i-cosm) Established; the Academic Council of IndSearch,a statutory body,approved CSR as a mandatory subject for MBA from Academic year 2010-2011

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Post Graduate Diploma in Environmental Management (PGDEM)

In the year 2001two institutions under the University of Pune, IndSearch (Pune) and another institute at Ahmednagar, started this course. The response from students to this course was at the most lukewarm.

Table 2 presents the information on the enrollment to the PGDEM course at IndSearch from the academic year 2001-2002 to academic year 2009-2010.

TABLE 1: Enrollment of students to the PGDEM course at IndSearch, 2001-2009

Academic Year	Male	Female	Total
2001-2002	9	3	12
2002-2003	3	4	7
2003-2004	10	3	13
2004-2005	6	3	9
2005-2006	7	5	12
2006-2007	2	5	7
2007-2008	4	1	5
2008-2009	4	0	4
2009-2010	13	3	16
Total	58	27	85

Encouragement by the Government of Maharashtra

On the basis of the initiative taken by IndSearch, the Government of Maharashtra issued a circular in July 2002 urging departments connected to environmental matters such as Municipal Corporations, Pollution Control Board, Water Supply Board, Regional Transport Authority, State Transport Corporation, Forests Department, Public Health Department etc., to take advantage of the "Employee Capacity Building Scheme" and encourage their employees to join the PGDEM at IndSearch. As a result of this circular, one employee from the Pimpri-Chinchwad Municipal Corporation joined the course in 2003. Two more, from the Maharashtra Pollution Control Board, joined PGDEM in 2005. No Government employee enrolled himself/herself for PGDEM from 2006 onwards, defeating the very purpose of the Government circular.

Public Awareness Lecture Series (PALS)

Under Public Awareness Lecture Series, IndSearch organized in 2003 a series of lecture on " ISO- 14001: Environmental Management Systems " and invited companies who had adopted these systems such as Philips Electronics and Sandvik Asia to share their experience. As a result some attendees of this lectures enrolled for the PGDEM course in the following years. This also helped institute- Industry interaction resulting in some people from industry offering to deliver lectures to the students.

The PALS initiative has continued since then, every year becoming bigger and better. The topics chosen were of current interest and the intent was to demonstrate the range of subjects covered under environmental management and their importance to industry. Table 3 provides information on the topics of PALS between 2003 and 2009.

TABLE 3: IndSearch Public Awareness Lecture Series (PALS)

Year	Topic
2003	ISO-14001:Environmental Management Systems
2004	Environmental Accounting and Reporting
2005	Environmental Laws and the Civil Society
2006	Climate Change and Carbon Trade–Who really benefits?
2007	Sustainability and Business
2008	Poverty Alleviation and BOP models
2009	India's most sustainable companies - What makes them successful? Perspectives of CII-ITC Sustainability Award Winners

Almost all industries in Pune and Pimpri-Chinchwad (the sister city of Pune), were invited to attend these lectures through individual e-mails as well as printed invitations. Inspite of such a galaxy of eminent personalities sharing their views in PALS the Pune industry's attendance in these lectures was dismal and one of indifference.

Under the initiative of the Ministry of Environment and Forest, a workshop was conducted in 20003 where it was revealed that there were five post-graduate diploma/ degree programs in environmental management and ten courses on environmental management as a part of the post-graduate degree/diploma program. Many of these courses/programmers have now been abandoned in 2009. One of the major concerns expressed in the workshop was the non-availability of competent and trained teachers to teach the subjects at the postgraduate level in management schools. It was also felt that the poor admission to these courses was due to the lack of interest among the industry to recruit trained persons from these institutions for specialized work on environmental management in industry.

Autonomy and Curriculum improvements

With the attainment of autonomous status 2007, the Institute decided to introduced Corporate Social Responsibility(CSR which includes business environmental management, as a mandatory subject for the Post-Graduate diploma courses in management and to offer the subject as an elective for the MBA course and (b) to convert the two year PGDEM course to a one year course ,after reviewing these Syllabi on the basis of feedback of the past students and industry .Both these decisions were implemented from the academic year2007-2008. In 2009, it was by the Academic Council to make CSR a mandatory subject for the MBA courses.

Student Interest

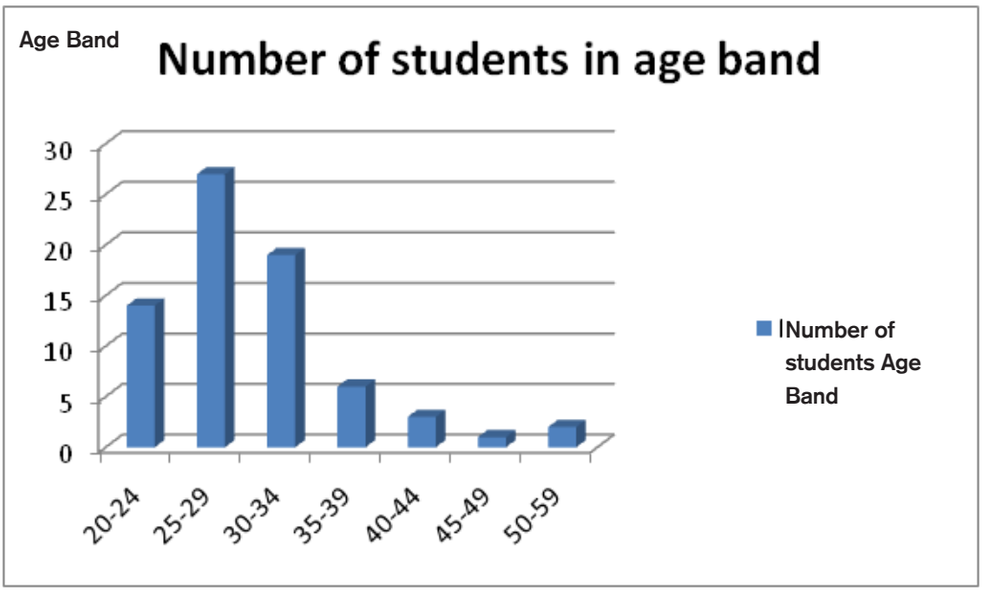
We have been conducting the part-time evening PGDEM course for the last nine years; the course is conducted in the evening to enable employed persons to attend the classes after their office/factory hours. The sanctioned capacity for this course is 60 students a year. If the

Sanctioned capacity had joined the course up to the full capacity we would have had 540 enrollments; but the actual enrollment in these nine years is just 85 students (i.e.only15%of the capacity for the course was enrolled); the female to male ratio of these enrollments is about1:2(table1). The lowest enrollment, 4 students, was in the academic year 2008-2009 and the highest has been in the academic year 2009-2010. The sudden increase in the enrollment for the PGDEM course in the year 2009-2010 after reaching at rough in 2008-2009 is in-explicable. It is possible that this increase is duet reduced campus recruitments in the academic year 2008-2009 due to economic down-turn.

Age and Basic Education

The average age of students enrolling for the PGDEM course has been about 31 years, the youngsters to enroll being 20 years and the oldest 56years (Figure1). More than 80% of the enrollments so far have been from students aged 25 years and above.12 out of the15 students in the below 25 years band are girls, indicating that more girls take up this course just after graduation.

Figure 1 : Age - distribution of students enrolled for PGDEM from 2001 to 2009

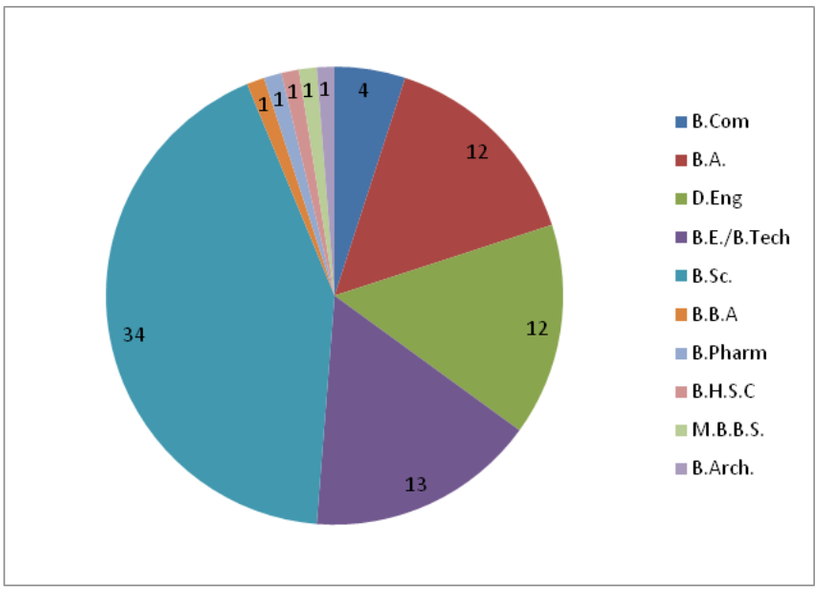


PGDEM beinga multi-disciplinary course attracts students from various disciplines; Figure 2 shows the distribution of the basic qualification of the enrolled students. It appears that the course attracts more of Science graduates than others; engineering graduates and social sciences

Graduates too have shown interest in the course to an appreciable extent. Even though we expected B.Com. and BBA students to opt for this course as an extension of their graduate education, their enrollment was too low to be significant; perhaps in their assessment PGDEM was for those students with science background.

During 2001 and 2009, ten students pursuing a fulltime Masters program in Management at IndSearch also joined the PGDEM course to enhance their knowledge and, probably to become more attractive to a recruiter than others.

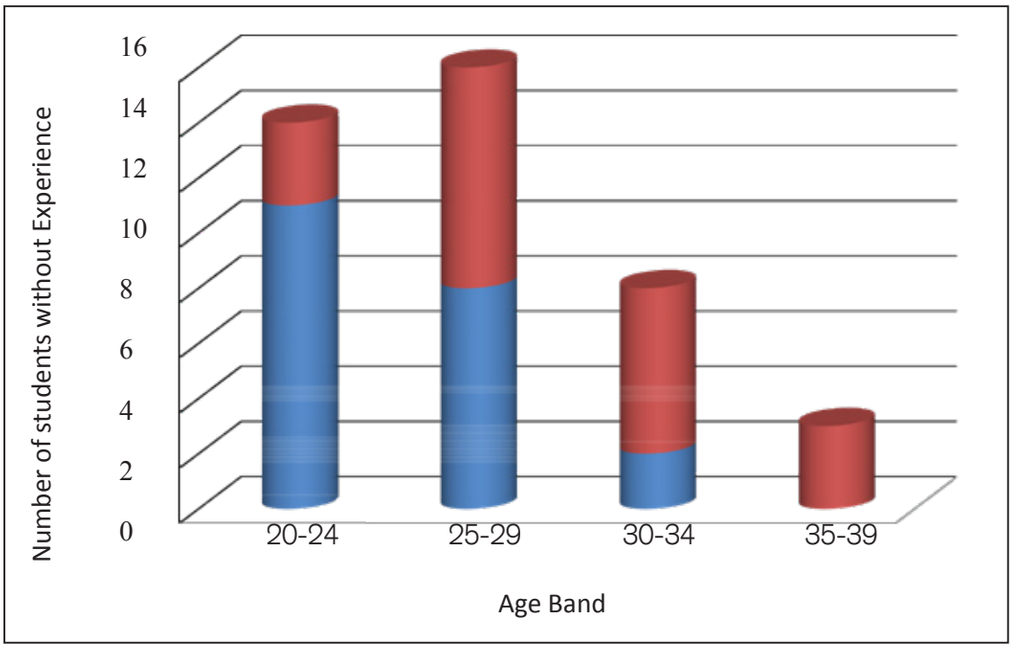
Figure 2 : Educational background of students enrolled for PGDEM



Work Experience

Almost half the students enrolled had work experience or were working during the course. Age- wise distribution of those who did not have any industrial experience when they joined PGDEM is shown in Figures 3. While more girls' in the age group 20-24 with no industrial experience enrolled for PGDEM, their number dropped with their age. On the other hand, the number of male students with no industrial experience in the age group 25-29, 30-34 and 35-39 enrolled for PGDEM was significant. Perhaps the course gave the female students some hope of getting a job placement after completing the course.

Figure 3 : Number of Inexperienced students in age bands.



The data available so far shows that (a) student interest in the PGDEM course at IndSearch is not up to the expectation of the University and the institution, (b)even though the student enrollment is low, graduates from almost all disciplines(science, arts, engineering etc.)show interest in the course,(c)more male students(69%)show interest in the course than female students,(d)more students above the age of 25 show interest in the course than those below that (e)it appears that the hope of getting a job placement after the course motivates some of the students who did not have any industrial experience to join this course and(f) for at least a few who pursue a full time masters course in management, the course offers an opportunity to improve the CV.

Institutional Interest

The prime driver for IndSearch to start and conduct the PGDEM course is its strong belief that educational institutions have areas possibility to Society in off erring education that is relevant and appropriate to the needs of the society. That explains why the PGDEM course has not been discontinued as has happened with many of the courses mentioned in2003 (Jose & Shukla, 2003)

Cost

Educational institutions, especially those which are not funded by the Government or other organizations, have to at least cover the cost of conducting a course in order to survive in the long run. On an approximate basis a one year two semester evening post-graduate management course needs to earn at least about Rs. 6,00,000 for payment towards faculty. Table 4 shows the fee collected from students of PGDEM during the period 2001-2009.

The data in table 4 is a clear indication that IndSearch incurred losses year after year conducting the PGDEM Course. But for the determination of the Director of IndSearch (one of the authors) this course could not have continued for so long.

TABLE 1: Enrollment of students to the PGDEM course at IndSearch, 2001-2009

Academic Year	Total Students	Fee collected in Rs.*	Average Fee in Rs.
2001-2002	12	56,900	4,742
2002-2003	7	52,722	7,532
2003-2004	13	1,10,900	8,531
2004-2005	9	94,800	10,533
2005-2006	12	1,59,000	13,250
2006-2007	7	1,27,750	18,250
2007-2008	5	1,08,550	21,710
2008-2009	4	97,000	24,250
2009-2010	16	4,31,900	26,994

* Fee concessions were given to students to attract them to the course; hence this figure is different from multiplying the number of students by the announced course fee

Government

In spite of the involvement of ministry of Environment and forest, no fund for infusing environment concepts in management education were allotted.

Even the Supreme Court Judgment on Environmental Education has resulted in the Ministry moving forward. Likewise in spite of the earlier directive government of Maharashtra no students from govt. department enrolled for this course.

Other Teaching/Research Institutions

Some institutions are conducting fulltime masters programmes in environmental management in 2009; since "environmental management" alone cannot "sell", they add either "occupational Health& safety" (e.g. NITIE) or "Energy" (e.g. Symbiosis). Of course there are courses in Environmental Management which are part of a master's programme in Management (e.g. XLRI). If one goes through the courses referred in the resource material provided at the Bangalore workshop (Joseand Shukla,2003)one could not get to see these courses being offered in 2009, indicating that these institutions have either withdrawn these courses for various reasons or converted them into new courses with a different title.

The above observations leadusto infer that (a) it is not economically viable to conduct courses like PGDEM in the context of a self-financing institution, unless the course is driven by the social commitment of the institution,(b) in tersest of the Government (both State and Central) to support educational institutions to teach environmental management at the post-graduate level appears to have waned(c) individual institutions which were enthusiastic initially to introduce environmental management at the post-graduate level have, perhaps, realized that the rear no takers for their courses and(d)if the environmental management courses have to be self- supporting, they have to be packaged differently(by adding other subjects) to attract students.

Industry Interest

This whole paper would have been irrelevant had there been an interest in industry for courses on environmental management. Our efforts to engage the industry, including visits of our faculty to various industries in Pune and Pimpri-Chinchwad, to support initiatives on environmental management education have so far been failures. It appears that "environmental management" has not established a place for itself in the organizational structure of business enterprises. Many times Environmental Management is mixed up with environmental science and environmental engineering and that explains the fact that the"environmental management"departments of many public sectors under takings are run by environmental engineers/scientists; in these cases the work done by these departments is confined to measurement and control of pollution parameters and to meet government regulations. Unless the subject is identified as a business strategic subject by industry, it appears that any course on "environmental management" in management education institutions will have to suffer. Till that time the current trend of appointing someone from the organization to take care of environmental issues will continue and such organizations will not need a specialist to advise them on environmental business issues.

It appears that the industry is not keen on a comprehensive environmental education; it is possible that it is more interested in short term training program and seminars.

Concluding Remarks

We believe that, as educators, our struggle to find a place for post-graduate management students with specialization in environmental management in business organizations in India will continue for some more time; environmental management as a stand-alone course for a post-

Graduate degree or diploma may not be an attractive proposition as of now. It appears that we need to at least sensitize the postgraduate management students studying subjects like general management, finance, marketing, HR etc., on relevant aspects of environmental management as an alternative, hoping that a critical mass of such sensitized managers may help to pave the way for a specialist environmental manager in the organization.

If we can engage the Government and Industry positively on the subject of environmental management education and the recruitment of specialists in environmental management for management positions, we will be contributing to the future of this country.

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