



# ETHOS

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### Case Study

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Guerrilla Marketing  
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Rayat Shikshan Sanstha's  
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## **From the desk of editor**

It is a matter of sheer pleasure to place before you the first issue of fourth volume of Ethos, a refereed biannual Journal of research articles in management science and allied areas. In fact we are enjoying the growth and overwhelming response received from authors, contributors and subscribers. The journal is an effort to provide a platform for exploration and articulation of knowledge of academicians, researchers, students, entrepreneurs, executives and consultants. At ETHOS, we publish original papers in the form of research articles and case studies.

We have added two sections in the journal i.e. book review and bibliography. In the last editorial also I made a mention of poor quality of research papers since the rejection percentage is going up day by day.

The present issue of ETHOS carries nine research papers, one case study and one bibliography. Research papers are a blend of empirical research in the functional areas of management like Marketing Management, General management, Financial Management Banking, Agricultural Management, Business Economics, Human Resource Development, and Textile Management.

Over a decade retailing sector has remain an issue for discussion and research. India has witnessed the ups and downs in retailing. Satish Pawar has attempted to investigate perception of customers regarding retail malls on the magnitude of improvements in the services.

Parastoo Sedaghat and Prof.Dr.Sharad Joshi have scholarly written review paper on factors affecting underpricing of initial public offerings. Though post liberalization economy leads to service sector and this sector is becoming more vibrant and professional. This phenomenon also touches to education sector as well. Besides this many educational groups have stick up to the basic values. Earn and learn scheme is one of them. Dr. Vijay Kakade and colleagues has narrated about higher education through earn and learn scheme, the article is though provoking. One more paper may catch your attention is on BT Brinjals in India by Mahdieh Gholampoor, R.M.Kharche and G.R.Pathade the paper is quite informative.

Vijay Kumbhar has presented an empirical article on customer satisfaction with respect to banking sector. The study is important since banking sector is undergoing phenomenal changes like computerization popularly termed as e-banking.

This issue of ETHOS carries Case Study titled, 'People's Trust for Public Finance' by Dr. Girish Jakhotia.

Meenal Dhotre and Madhavi Khaire have contributed bibliography titled, 'Guerrilla Marketing' which is one of the important topics in marketing.

I believe that the articles and case study contributed by esteemed academicians and scholars for this issue would be immensely readable and beneficial to academicians, research scholars and industrialists. I look forward to your valuable feedback to enable us enthrall readers and ensure kaizen.

**Dr. B.S. Sawant**  
*Editor-in-Chief*

# A Comparative study of Organized Retailing (Retail Market) In Perception of Customer in Pune, India

Satish Pawar

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## Abstract :

Retailing - no marks for guessing this is the most active and attractive sector of the last decade. The emergence of retailing in India is due to increasing purchasing power of buyers, especially post-liberalization, increase in product variety, and the increasing economies of scale, with the aid of modern supply and distribution management solutions.

This Study investigates perception of customers regarding retail Malls. A random sample of 300 customers visited to various retail stores has been taken for this research. Data collection was done through structured questionnaire. Window Microsoft Excel Spread Sheet and SPSS 16.00 used for analysis.

From the present study it was considered that among Indian organized retail industry Big Bazaar has leading position in market as perceived by 108 (36%) customers. Average waiting time for billing is 5-10 minutes, the average distance customer travel to come at various formats of organized retailing is 5-7 km. Food Bazar has leading position in price, Assortment of Products, Product variant & Range, Discount, offers & schemes while More leads in Ambience, Cleanliness, store convenience.

**Keywords:** Retailing, Organized Retailer, Retail Market,

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## Traditional Retail Scene in India:

India is the country having the most unorganized retail market. Traditionally the retail business is run by Mom & Pop having Shop in the front & house at the back. Profits were accumulated in slow moving & non-moving stocks which were to become redundant or consumed in-house. Thus profits were vanished without their knowledge. The Manufactures were to distribute goods through C & F agents to Distributors & Wholesalers. Retailers happen to source the merchandise from Wholesalers & reach to end users.

The retail scenario in India is unique. Much of it is in the unorganized sector. With over 12 million retail outlets of various sizes and formats. Almost 96% of these retail outlets are less than 500sq.ft.

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In the size and the percapita retail space in India being 2 sq.ft compared to the U.S. figure of 16sq.ft. India's percapita retailing space is the lowest in the world. With more than 9 outlets per 1000 people, India has the largest number in the world. Most of them are independent and contribute as much as 96% to total retail sales. There is an incredible amount of activity in terms of creation of retail-oriented space across India. As per some estimates, there are over 200 retail mall projects under construction or under active planning stage spanning over 25 cities. This may translate into over 25 million sq. ft. of new retail space in the market within next 24 months.

## Present Indian Scenario :

In India total unorganized market comprises of nearly Rs. 583,000 crores while organized retail market comprises of Rs.5,000 crores. Over 4,000 new modern retail outlets emerges in the last 3 years which leads to over 5,000,000 sq. ft. of mall space under development. The top 3 modern

retailers control over 750,000 sq. ft. of retail space. Over 400,000 shoppers walk through their doors every week. Growth in organized retail on at par with expectations and projections of the last 5 Years on course to touch Rs. 35,000 crores (US\$ 7 Billion) or more by 2005-06. Organized retail formats in India each of the retail stars has identified and settled into a feasible and sustainable business model of its own.

The growing aspirations of Indian consumer, who wants to have good shopping experience, favors multiple choices and ready to discard neighborhood grocery shops is what is pushing Indian market to go in for organized retail marketing. With consumers looking at convenience with multiplicity of choice under one roof and expectations evolving over time, consumer demand is truly the driving force reorganized retailing in the country. Food and beverages form the main chunk of the retail market. They are followed by apparel and footwear. Food and clothing still account for the largest proportion of consumer spending. Together they account for about 60% of the estimated US\$ 275 billion household expenditure.

"The demand perspective in India highlights some key changes in consumer demographics driving organized retailing. These include Income and consumption growth, Increasing literacy levels, Changes in family structure and women's role in the family, Growing role of children as influencers, Gradual acceptance of frozen goods as a viable alternative to fresh produce, Growing influence of TV, The urban consumer getting exposed to international lifestyles, the growth of integrated shopping malls, retail chains and multi-brand outlets is evidence of consumer behavior being favorable to the growing organized segment of the business. Space, ambience and convenience are beginning to play an important role in drawing customers.

Thus Retail sector is classified as Organized and Unorganized. The organized retail is characterized by professional management & strong customer focus. In India retail sector is 2nd largest Sector after Agriculture, it employs 10% of total

workforce of Country. Moreover 25 of top Fortune 500 companies are in Retail and 25Mn Sq.ft of retail space is being developed.

#### **Different Formats of Retailing in India:**

There are various different organised retail formats exist all over the world and hence in India. It can be categories on various parameters like space utilized for the business. It is like Hypermarkets (1,00,000Sq.ft)(Big Bazaar, Hyper city, Giant, Shoprite), Supermarkets (Spencer's Daily), Departmental Stores (30,000-75,000Sq.ft)(Shoppers Stop, Pyramids), Convenience store, Lifestyle Stores (Central, Lifestyle), Discount Stores (30,000-50,000Sq.ft) (Vishal Mega Mart, Factory Outlet), Cash-n-carry ( Wal-Mart)

The Indian retail sector can be broadly classified into food retailers, Health and Beauty products, clothing & footwear, home furniture & household goods.

#### **Literature Review:**

Researchers have studied some previous literature related to this topic. Some of significant contributions of various authors are summarized below.

Mathew Joseph, Nirupama Soundararajan, Manisha Gupta, Sanghamitra Sahu (2008) ICRIER (Indian Council for Research on International Economic Relations) (2008) undertaken study on retail industry, it attempts to study of impact of organized retailing on different segments of the economy. The study estimates that total retail business in India will grow at 13 per cent annually from US\$ 322 billion in 2006-07 to US\$ 590 billion in 2011-12 while unorganized retail sector will grow 10 per cent annually from US\$ 309 billion to US\$ 496 billion. As they studied impact on different segments, researcher also studied impact of organized retailing on consumers. In that research it is concluded that consumers have definitely gained from organized retailing on multiple count. Researcher of this study pointed out that all the income groups saved through organized retail purchase. Organized retail is relatively more beneficial to less well-off consumers.

Talpade (1997), Salil (1997), Hyenes (1997), Joel (1997) in their research article under the title of "Consumer shopping behavior in malls with large scale entertainment centers" under this research work they concluded that Shoppers who visited the entertainment centers were not driving a longer distance to reach the mall.

Daniel Suryadarma (2007), Adri Poesoro, Sri Budiayati, Akhmadi, Meuthia Rosfadila in their research report title "Impact of Supermarkets on Traditional Markets and Retailers in Indonesia's urban center" In this research report researcher found that there is no significant impact on earnings and profit but statistically significant impact of supermarkets on the number of employees in traditional markets

Ms. Rekha Saraswat (2011), in their research article title "Factors Affecting Impulse buying Behaviour In The Malls Special Reference to Noida City" under this research work concluded that the behavior of people shows that they are ready to visit the mall. It shows the dearth of the malls, which are a good destination place for the Noidaites. 66% of respondents felt that the quality offered by a particular brand, 43% felt the variety offered by the brand (which is not the case with most of the unbranded products) as the reason to patronize particular brand. Price being of least importance when it comes to the quality and variety offered.

Dr. Bernadette D'silva, Dr. Stephen D'silva, Roshani Subhodkumar Bhuptani (2010) in their research article title "Positioning Strategies in Indian Supermarkets: An Empirical study" under this research work it has been found that Indian consumers are quite influenced by the visibility, advertising and attractive bumpers on the product.

Ugur Yavas (2001) in their research article title "Patronage motives and product purchase patterns: a correspondence analysis" Results suggest that price competitiveness, courtesy of personnel, cleanliness, variety of stores, merchandise quality and product selection in stores are the primary shopping motives. Also among the relatively more important motives are atmosphere, security,

presence of new fashions, ease of access and parking facilities

Erdener Kaynak (1985), in their research article title "Cross-Cultural Food Buying Behaviour" concluded that locational convenience (nearness to the store) is of utmost importance to the shopper. Secondly, price of groceries plays an important role in determining where shoppers shop, given locational access to various alternative food retail outlets.

Sunil Patel, Himanshu Barot, Keyur Darji (2010) "Study on Customer Perception of Planet Health Retail Pharmacy Chain Store at Ahmedabad City" The study was carried out at Planet Health Retail Store (Ahmedabad) where the survey has been conducted through questionnaire. The conclusion of the study shows that as far as CRM and store ambience is concern, they are managed properly, while the product range should extend vertically and horizontally.

#### **Research Methodology:**

The research is undertaken to test the hypotheses as, Customers travel more than 5 km to shop at organized retail format and second hypothesis is that there is uniformity in Price, Assortment of Products, and Ambience, Cleanliness, Product Variety & Range, Discounts, Offers & Schemes, On Floor Service, Store Convenience in various retailing format

On the basis of hypotheses present study purports objectives viz. To know the leader in organized retail formats in perception of customers, in Pune, India. To know the distance travelled by customers to visit organized retail format and last objectives is to know opinions of samples on Price, Assortment of Products, Ambience, Cleanliness, Product Variety & Range, Discounts, Offers & Schemes, On Floor Service, and Store Convenience amongst various organized retail formats in Pune, India.

With the help of well structured questionnaire researcher collected the data through convenience sampling method from Fatima Nagar area in Pune where organized retail outlets are situated comprises, BigBazaar, Vishal Mega Mart, Subhiksha, Reliance Fresh etc.

Present research is descriptive in nature set to test hypothesis. Sample size for this research is 300 respondents.

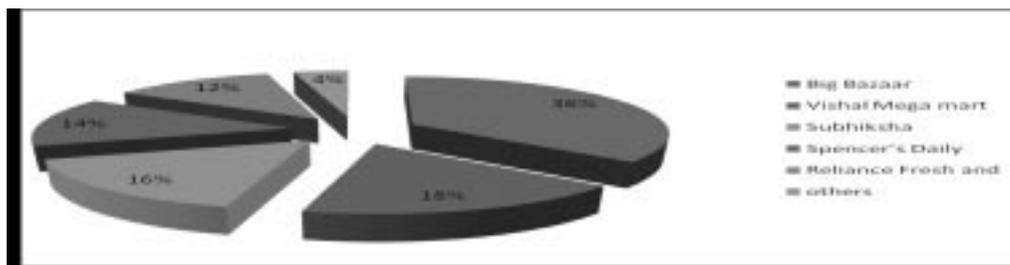
**Data Analysis, Presentation and Discussions:**  
This section of paper discusses data presentation and analysis.

**Table 1: Recall about Retail Store**

Following table shows immediate recall about retail store that is the name comes first in mind when talks about retail store.

Sr.	Name of Retail Store	No. of Respondents	Percentage
1.	Big Bazaar	108	36%
2.	Vishal Mega mart	54	18%
3.	Subhiksha	49	16%
4.	Spencer's Daily	41	14%
5.	Reliance Fresh and	37	12%
6.	Others	11	4%
<b>Total</b>		<b>300</b>	<b>100%</b>

Source: (Field data)



Graph 1: Recall about Retail Store

(chi square=34.38, p=0.00 (<0.05)), significant)

The brand awareness of Big Bazaar is highest among all other retailers with 36%, followed by Vishal Mega mart with 18%, Because of the quality

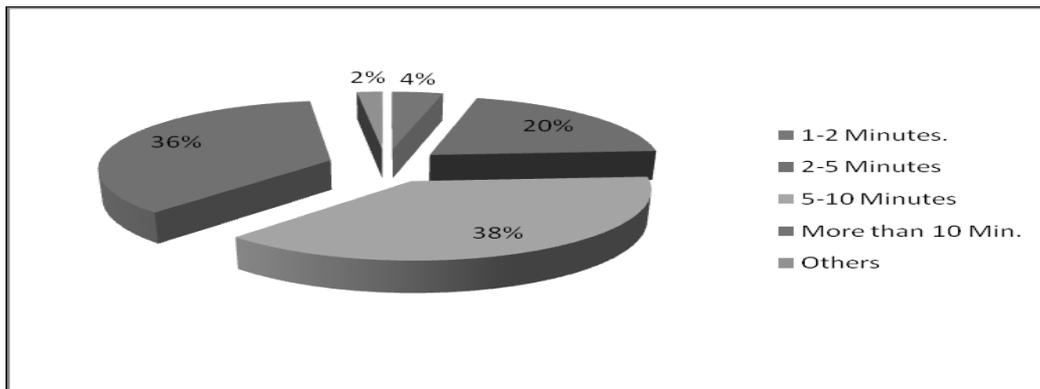
products at affordable prices, Big Bazaar has won Heart- share of the middle -class consumers.

**Table 2: Average waiting time for Billing**

Following table shows waiting time for billing of customers in different retail store

Sr.	Source	No. of Respondents	Percentage
1.	1-2min.	12	4%
2.	2-5 min.	60	20%
3.	5-10 min.	114	38%
4.	More than 10 min.	108	36%
5.	Others	6	2%
<b>Total 300</b>		<b>100%</b>	

Source: (Field data)



Graph 2: Average Time for Billing

chi square= 32.22, p=0.00 (<0.05) , significant

38% of the customers are waiting for 5-10 min. for Billing & 36% of the customers are waiting for more than 10 min. Thus billing waiting period should be reduced.

**Table 3 : Average distance Customers travel to come at retail mall**

Sr.	Source	No. of Respondents	Percentage
1	0-1 Km.	18	6%
2	1-2Km.	60	20%
3	2-5 Km.	42	14%
4	5-7Km.	96	32%
5	More than 7 Km.	84	28%
	Total	300	100%

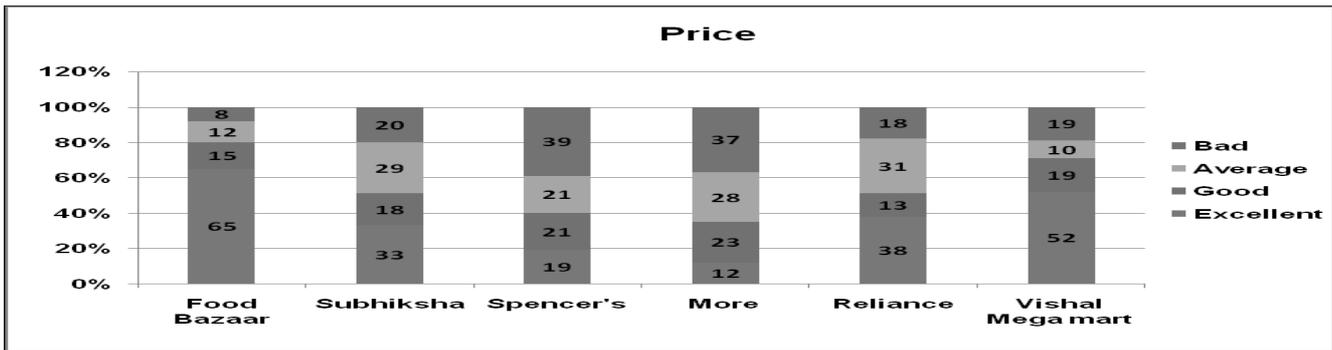
Source: (Field data)

(chi square=34.02, p=0, significant )

32% of the customers travel at least 5-7km. to shop at retailing mall followed by 28% customers travel more than 7Km. Thus 60% customers have to travel 5-7 km or more than that to shop at any retailing mall.

**Table 4: Consumer Opinion for Price**

Sr.	Name of Retail Store	Excellent	Good	Average	Bad
1	Food Bazaar	195	45	36	24
2	Subhiksha	99	54	87	60
3	Spencer's	75	93	123	9
4	More	60	84	114	42
4	Reliance	114	39	93	54
5	Vishal Mega mart	156	57	30	57



Graph.3: Consumer opinion regarding Price of Product in Different Retail Store

Most of customers are satisfied with Food Bazaar price system 195 (65 %), followed by Vishal mega mart 156 (52%)

Researcher has taken opinions of sample respondents on varies variables like assortment of products, ambience, cleanliness, product variety and range, discounts, offers and schemes, floor service and store convenience. The tabulations of opinions on these parameters are annexed for reference.

#### Findings and Discussion:

After completing survey work and all data analysis, researcher has reached at the following conclusions. Brand Awareness of Big Bazaar is highest among all retailers. The primary source of awareness about Big Bazaar is Newspaper, Friends & Relatives i.e. Word of Mouth publicity.

1. Big Bazaar is at leading position in market (Statistically significance difference, chi square test ,  $p < 0.05$ ).
2. The hypothesis, customers travel more than 5 km to shop at organized retail format is accepted (chi square test,  $p$  value  $< 0.05$ ) by this study. It reveals the fact that customers has to travel more to shop at organized retail format than to buy at traditional retail shops.
3. The hypothesis, that there is uniformity in Price, Assortment of Products, Ambience. Cleanliness, Product Variety & Range, Discounts, Offers & Schemes, On Floor Service, Store Convenience in various retailing format is rejected (chi square test,  $p$  value  $< 0.05$ ) by this study. There statistically very high significant difference between these parameters.

4. There is a strong association found between Prices. Assortment of Products,. Ambience,. Cleanliness, Product Variety & Range, Discounts, Offers & Schemes, On Floor Service, Store Convenience and various formats of organized retailing (Big Bazar, Vishal mega mart, Reliance Fresh, Spencer's Daily, More & Subhiksha.) in Pune, India ( Statistically significant difference, chi square test ,  $p < 0.05$ ).

5. Among all the retailers average price value of food Bazaar highest followed by Vishal Mega mart. Thus Big Bazaar needs to improve upon its quality factor. The price value lowest among is More. Among all the retailers average Assortment of Food Bazaar is highest closely followed by Subhiksha. The researcher found that Ambience of More is excellent followed by Food Bazaar & Reliance. Vishal Mega mart ambience is worst among all. So Food Bazaar should increase the quality of ambience including interior. The researcher has found that the More & Reliance more clean among the all. The researcher is found that the Food Bazaar Variety & Range is the best followed by Subhiksha & Vishal Mega mart. So Food Bazaar should increase its Product variety i.e. Medical, Cigarettes, etc

Extend store timings on weekends: The store is at most times overcrowded during weekends. The reason for the same is firstly the weekly holidays that people of Pune get and secondly the various

offers that are introduced by the store on weekends to ensure maximum crowd turnout. This has a large negative impact on the store. Not only does the customer find himself in a crowd (which turns them away), but also customer service goes for a toss. Add to this those overcrowded toilets, slower billing, damages to products due to over-crowding, etc. Extend the working hours of the store during these "overcrowded" days. The store timings should be extended by at least 1 hour on these days. Ideally the store must open at 8 AM and shut at the usual 10 PM. Also there must be some additional offers in the morning on groceries and food items. The people who would come as early as 9 AM are essentially women who would come here to shop for groceries and food items if they are offered at a discount. If the store can provide discount on any 1-2 product categories (for e.g. vegetables), these women would come to the store at these times. The store must not provide any offer on these commodities during the rest of the day. This will spread the traffic on weekends, bring in more customers and also improve operational and service related efficiencies. Thus the store can actually plan the way its customers come on weekends.

#### **Service Level :**

Customer support/service was NOT rated well in the store, especially in electronics and mobile segment. The service staffs are not being proactive in these segments. Also they don't attend the customers thought-out their shopping time at the section. They tend to attend the customer for a couple of minutes and then they leave them alone. This has a very BAD impact on the customer's mood and thus the store sales. Customer in such cases tends to lose interest very soon in such cases. This might be happening in other sections also, but as the customer involvement (and need for service staff) is less their functioning cannot really be rated.

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- [www.retailvatra.com](http://www.retailvatra.com)
- [www.marketingIQ.com](http://www.marketingIQ.com)
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- [www.wikipedia.org](http://www.wikipedia.org)
- [www.hypercityindia.com](http://www.hypercityindia.com)

**Annexure :**

Opinions of samples on selected variables with reference to selected retail format.

**Table 5: Consumer Opinion for Assortment of Products**

<b>Sr.</b>	<b>Name of Retail Store</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Bad</b>
1	Food Bazaar	153	66	48	33
2	Subhiksha	141	42	54	63
3	Spencer's	72	45	81	102
4	More	93	57	72	78
5	Reliance	69	114	84	33
6	Vishal Mega mart	57	60	126	57

**Table 6: Consumer Opinion for Ambience :**

<b>Sr.</b>	<b>Name of Retail Store</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Bad</b>
1	Food Bazaar	99	117	30	54
2	Subhiksha	84	87	75	54
3	Spencer's	69	30	132	69
4	More	129	111	36	24
5	Reliance	117	105	51	27
6	Vishal Mega mart	66	78	114	42

**Table 7: Consumer Opinion Cleanliness:**

<b>Sr.</b>	<b>Name of Retail Store</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Bad</b>
1	Food Bazaar	126	90	48	36
2	Subhiksha	84	114	30	72
3	Spencer's	87	120	54	39
4	More	135	117	36	12
5	Reliance	111	108	54	27
6	Vishal Mega mart	69	30	132	69

**Table 8: Consumer Opinion for Product Variety & Range:**

<b>Name of Retail Store</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Bad</b>
Food Bazaar	168	54	48	30
Subhiksha	126	84	54	36
Spencer's	60	69	87	84
More	102	105	63	30
Reliance	84	123	57	36
Vishal Mega mart	138	66	54	42

Table 9: Consumer Opinion for Discounts, Offers & Schemes:-

Name of Retail Store	Excellent	Good	Average	Bad
Food Bazaar	153	114	18	15
Subhiksha	84	78	60	78
Spencer's	72	81	87	60
More	36	72	78	114
Reliance	54	72	78	96
Vishal Mega mart	126	102	54	18

Source: (Field data)

Table 10: Consumer Opinion for On Floor Service:

Name of Retail Store	Excellent	Good	Average	Bad
Food Bazaar	123	111	42	24
Subhiksha	81	84	75	60
Spencer's	69	75	87	69
More	138	120	30	12
Reliance	66	78	114	42
Vishal Mega mart	81	42	108	69

Source: (Field data)

Table 11: Consumer Opinion for Store Convenience:

Name of Retail Store	Excellent	Good	Average	Bad
Food Bazaar	150	63	54	33
Subhiksha	84	33	72	111
Spencer's	78	39	81	102
More	75	75	69	81
Reliance	102	72	60	66
Vishal Mega mart	156	84	36	24

Source: (Field data)

# Institutional Explanations Theory as Factors Affecting Underpricing of Initial Public Offerings (IPOS)

Parastoo Sedaghat, Prof.Dr.Sharad L. Joshi

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## Abstract :

This paper reviews institutional explanations theory as a factor affecting under pricing of Initial Public Offerings (IPOs). There are three different aspects related to the models based on institutional and legal framework of IPO and features of the marketplace: Litigation, Investment Banks' price stabilization activities once trading starts, and Taxes. Firms use under pricing to reduce expected legal liabilities and possible lawsuit costs after the IPO. Legal and institutional arrangements may also influence the pricing processes. In Price stabilization, shares are purchased by the underwriters to increase the aftermarket share price. It also allows them to disguise overpriced offerings from investors by temporarily inflating the stock price, thereby arresting the speed at which the prices deflate in the market. In this exercise the most important beneficiaries are the institutional investors who participate in the book-building process. It has also been proved that underwriters are more active in aftermarket activities for less risky IPOs. Taxation is another factor identified by the theory based on institutional and legal aspects of IPO.

**Keywords:** Initial Public Offerings (IPOs), Under pricing, Institutional Explanation Theory, Legal Liability, Price Stabilization, Tax Arguments

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## Introduction:

Institutional theories focus on three features of the marketplace: litigation, banks' price stabilizing activities once trading starts, and taxes. Ibbotson (1975) and Tinic (1988) posit that firms intentionally underprice their shares as a form of insurance against future liability (litigation), and the issuer and the underwriter agree to set the offer price below the expected market value of the securities because this decreases the probability of future litigation as well as the costs of litigation in the event of a lawsuit. The IPO literature shows a variety of approaches explaining the IPO-

underpricing. We now turn to three 'institutional' explanations for IPO underpricing: First, the litigiousness of American investors has inspired a legal insurance or lawsuit avoidance hypothesis. The basic idea, which goes back at least to Logue (1973) and Ibbotson (1975), is that companies deliberately sell their stock at a discount to reduce the possibility of future lawsuits from shareholders disappointed with the post-IPO performance of their shares. Tinic (1988) extends and develops the theoretical framework. This explanation is somewhat U.S.- centric, in that underpricing is a global phenomenon, while strict liability laws are not. The risk of being sued is not economically significant in Australia (Lee, Taylor, and Walter, 1996), Finland (Keloharju, 1993), Germany (Ljungqvist, 1997), Japan (Beller, Terai, and Levine, 1992), Sweden (Rydqvist, 1994), Switzerland (Kunz and Aggarwal, 1994), or the U.K. (Jenkinson, 1990), all of which experience underpricing. Still, it is possible that lawsuit avoidance is a second-order driver of IPO underpricing. The second institutional approach

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**Institutional Explanations Theory as Factors Affecting Underpricing of.....**

is based on the practice of price support. One of the services that underwriters provide in connection with an IPO is price stabilization, intended to reduce price drops in the after-market for a few days or weeks. Perhaps surprisingly, such 'price manipulation' is legal in many countries, including the U.S. (1934 Securities Exchange Act, Rule 10b-7, since replaced by Regulation M). Statistically, price stabilization results in fewer observations of overpricing, and so shifts up the observed mean initial return. Third, there may be tax advantages to IPO underpricing. This results in a trade-off between the tax benefit and the dilution cost of underpricing. Depending on their tax situation, managers may prefer more or less underpricing.

#### **Literatures:**

##### **Legal Liability:**

Under the securities laws in countries like the U.S., issuers, underwriters, and accountants face litigation risk as investors can use them for misleading statements or omissions in the IPO prospectus. The securities Act of 1933 confers investors the right to bring an IPO-related lawsuit against any participants involved in the marketing and sale of a new equity issue. The potential settlement payments and legal fees associated with lawsuits are notably costly. In addition, the loss of management time, and potential damages to the reputations of underwriters and issuers are also considerable.

Tinic (1988) provides the first empirical test of the lawsuit avoidance hypothesis. He compares the underpricing of 70 IPOs filed between 1923 and 1930 (prior to the Securities Act of 1933) to the underpricing of 134 IPOs filed between 1966 and 1971 (after the securities Act of 1933). He finds that the post 1933 IPOs provide significantly higher initial returns than the pre-1933 IPOs. He argues that the increased litigation risk for issuers and underwriters after the 1933 Securities Act motivated them to use higher underpricing as a form of insurance against potential lawsuits. By selling an IPO share below its expected value, both the issuer and the underwriter are less likely to be

sued. In addition, a lower offer price reduces the amount of damages that plaintiffs can claim. In Tinic's model, the expected legal liabilities are measured by the probability of the issuer or the underwriter being sued and the amount of damages suffered by these parties. The former is a decreasing function of the post offer price over the offer price and the latter is an increasing function of the difference between the offer price and the post-offer price. Other formal models of the lawsuit avoidance hypothesis are provided by Hughes and Thakor (1992) and Hensler (1995). Hughes and Thakor (1992) expand Tinic's model by specifying sufficient conditions for equilibrium underpricing in a game theory setting. Hensler (1995) extends Tinic's conjecture by developing a single-priced maximum utility model.

Drake and Vetsuypens (1993) question Tinic's results. They find no support for the deterrence effect. They claim that underpricing does not reduce the probability of a lawsuit. They find that underpriced IPOs are just as likely to be sued as overpriced IPOs and that there is no significant difference in underpricing between sued and non-sued firms. Lowry and Shu (2002) argue that Drake and Vetsuypens' ex post comparison is biased and suggest that it is litigation risk- not the actual occurrence of litigation- that is associated with higher underpricing. The Drake and Vetsuypens (1993) analysis suffers from the following endogeneity problem. Under the litigation-risk hypothesis, initial returns can be related to the probability of a lawsuit along two dimensions. First, firms with higher litigation risk should underprice their IPOs by a greater amount as insurance against litigation. This implies that initial returns are an increasing function of litigation risk. Second, firms that buy more insurance against litigation, i.e., underprice more, should be sued less often. This implies that litigation is a decreasing function of initial returns. Because the probability of being sued is itself an endogenous variable that could depend on underpricing, a comparison of initial returns across sued and non-sued firms is problematic.

Prabhala and Puri (1999) also provide evidence against Tinic's conjecture. They compare Tinic's pre-1933 IPO sample to a sample of IPOs filed between 1985 and 1994. They predict that pre-1933 IPOs should be riskier than IPOs in the 1985-1994 sample since issuers and underwriters faced little legal liability prior to 1933 (They argue that pre-1933 IPOs were largely unregulated. The lack of regulation prior to 1933 increased the possibility that IPO investors were misled by the issuer and was unable to recover their losses). They consider offer price, offer size and the standard deviation of initial returns as proxies for IPO risk and find that 1985-1994 IPOs were riskier than 1923-1930 IPOs. They conclude that the difference in underpricing between Tinic's pre-1933 and post-1933 IPO sample is likely caused by differences in risk without recourse to potential differences in legal risk enforced by the Securities Act of 1933.

Lowry and Shu (2002) examine the link between risk and IPO underpricing by postulating two implications of the lawsuit avoidance hypothesis: the insurance effect and the deterrence effect of IPO underpricing. (i) Under the insurance effect, IPO firms associated with higher litigation risk should underprice their shares more to avoid being sued (legal liability) (See also, Tinic 1988, Hughes and Thakor 1992, and Hensler 1995). (ii) Under the deterrence effect, higher levels of underpricing reduce the probability of litigation for possible misstatements or omissions in the IPO prospectus of being sued and the expected legal liability costs (See also, Ibbotson 1975, Tinic 1988, Hughes and Thakor 1992, Hensler 1995, Jenkinson and Ljungqvist 2001, Saha and Ferrel 2007). In order to resolve the methodological problems of previous studies, Lowry and Shu adopt a simultaneous equations system in a cross-sectional framework using a sample of 1841 IPOs between 1988 and 1995. Their empirical results provide support for both the insurance effect and the deterrence effect of IPO underpricing. Lowry and Shu (2002) address the endogeneity of the insurance and deterrence effects and find support for the insurance effect. If firms purchases

ineffective insurance (i.e., insurance holds and deterrence fails), then the likelihood of this being a stable result seems unlikely.

Turtle and Walker (2004) use a sample of 1669 IPOs filed in the US between 1996 and 2000, and find no support for the lawsuit avoidance hypothesis in a simultaneous equations framework similar to Lowry and Shu (2002). They do not reject the lawsuit avoidance hypothesis as a potential explanation for IPO underpricing but point out that it has become less important in the US in recent years. They argue that two recent security law reforms, the 1995 Private Securities Litigation Reform Act and the 1998 Securities Litigation Uniform Standards Act, have significantly reduced the litigation risk borne by US issuers and their underwriters and have reduced the need to buy litigation insurance through underpricing. In addition, they observe that IPO characteristics, including underpricing, have little influence on plaintiffs' decision to file a lawsuit and that a firm's litigation risk is largely determined by events in the IPO aftermarket including unrelated industry downturns.

The incidence of litigation has been found to be increasing in client firm size and membership in certain high-risk industries (Francis et al. 1993, O'Brien and Hodges, 1993). Alexander (1991) also argues that the larger companies are more likely to be targets of litigation because the absolute drop in market value, and thus the potential recovery, must be sufficient to cover legal fees. Keloharju (1993) says that legal liability is not the primary determinant of underpricing is that countries in which U.S. litigate tendencies are not present have similar levels of underpricing.

Pukthuanthong et al (2009) consider legal opportunism as an explanation of litigation following a large sample of IPOs. And, they characterize legal opportunism by the existence of lawsuits filed largely in response to negative ex post market behavior for the firm and its industry. And, they find out evidence that litigation rise for IPO firms and related settlement amounts

are largely explained by aftermarket performance, not ex ante risks that were apparent at the time of the IPO. Ex ante variables provides little ability to predict lawsuit activity or settlement amounts. Their findings suggest that prior support for the hypothesis may have been sample specific and that lawsuit avoidance plays at best out no support for either the insurance or the deterrence effect of IPO underpricing. Firms with high litigation risk do not underprice their IPOs more to purchase litigation insurance, nor does underpricing deter future litigation.

Lowry and Shu (2002) argue that plaintiffs may preferentially seek out IPOs underwritten by reputable underwriters as they tend to have 'deeper pockets'. The pre-1995 regime of joint and several liability made underwriters equally liable and allowed plaintiffs to recover damages from underwriters if the sued firm had insufficient funds. The post-1995 regime of proportionate liability suggests less likelihood that higher ranked underwriters will be sued more often. In particular, large firms with deep pockets tend to be sued in sustained firm and industry downturns. Michaely and Shaw (1994) propose that larger firms should be more underpriced because larger issues may be harder to sell. Rogers and Van Buskirk (2009) suggest that managers that experience litigation learn this and reduce their forecasting behavior following litigation. In successful real-world IPO litigation, two conditions generally appear to hold: (1) the stock price in the after-market falls below the issue price, and (ii) earnings are below expectations, leading to a "sufficiently" high probability that the firm was overpriced in the IPO.

#### **Legal Act:**

A potential link between IPO underpricing and legal liabilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 was first suggested by Ibbotson (1975), and since has received empirical support by Tinic (1988).

As a point of legal fact, the amount of damages that can be awarded in lawsuits filed under Section 11 of the 1933 Securities Act increases in the

difference between the offer price and the subsequent (lower) trading price. Thus, underpricing reduces the likely damages. This in turn reduces the probability of litigation assuming the size of expected damages affect class-action lawyers' incentives to file a suit. Section 11 (a) of the Securities Act of 1933 defines the civil liability for public offerings as follows: if a registration statement (i.e., Prospectus), at the time it became effective, "contained an untrue statement of a material fact or omitted to state a material fact ... any person who acquired any security covered by the registration statement can sue certain specific persons to recover the difference between the price he paid for the security (but not more than the public offering) and the price at which he disposed of it or (if he still owns it) its value at the time of suit." The purchaser must demonstrate only that there was a material misstatement or omission in the prospectus and that he lost money. Section 11 (b) states that the purchaser can sue every person who signed the registration statement, including the underwriters. But underwriters are relieved of civil liability under the "due diligence" defense if they can demonstrate that they had a reasonable ground for believing the truth of the statement. Despite this, litigation risk exists even for issuers who are not fraudulent because a sufficiently unfavorable ex post outcome may create the suspicion of fraud. Under the 1933 Securities Act, the maximum loss an investor can claim is the difference between the price paid for a security (but not more than the offer price) and the selling price or (if still owned) its value at the time of the suit. Thus, the lower the offer price of a security, the lower the likelihood of a suit and the lower the damages a plaintiff can claim.

Tinic (1988) proposes that more experienced underwriters were associated with lower underpricing in the post-1933 sample but not before. This is consistent with his prediction that greater due diligence skills reduce the need for underpricing as a form of protection against lawsuits. On the other hand, simple certification arguments yield the same prediction, so as a test

of the legal insurance hypothesis, the relation between underwriter experience and underpricing has little power. This relation appears to have changed sign in the 1990s (Beatty and Welch, (1996). However, it is not impossible to rationalize a positive relation within the legal insurance hypothesis: more prestigious underwriters may have deeper pockets and so is more worth suing, leading them to rely more heavily on underpricing. Evidence based on the relation between underpricing and underwriter experience thus also appears inconclusive.

Lowry (2002) states that one reason for IPO underpricing is litigation risk. The risk of lawsuits arise in the context of section 11, Sections 12 and Section 10(b) securities act (1933) under section 11 damage for direct purchases in the IPO are based on the difference between the offer price and either the sale price or the securities price at the time of lawsuit. Section 12 and Section 10 (b) similarly apply to both direct and after market purchases Damage under both these sections are based on the investor's purchase price. IPO underpricing represents a form of insurance against future litigation in that it has a lower potential damage and decreased probability of being sued. Lowry concludes that after controlling for the endogeneity of initial returns and lawsuit probability, the evidence lends support to the litigation risk hypothesis. First, they find out that firms with higher litigation risk underprice their IPO by a significantly greater amount. Second, consistent with underpricing representing a viable form of insurance, firms that engage in more underpricing significantly lower their litigation risks, especially for lawsuits occurring closer to the IPO dates.

#### **Price Stabilization:**

The Securities and Exchange Commission (SEC) defines price stabilization as "... transactions for the purpose of preventing or retarding a decline in the market price of a security to facilitate an offering." Such practices are permitted because: Although stabilization is a price-influencing

activity intended to induce others to purchase the offered security, when appropriately regulated it is an effective mechanism for fostering an orderly distribution of securities and promotes the interests of shareholders, underwriters, and issuers. (SEC release No. 34-38067, 1997, P.81). Price stabilization is defined, as share purchase made by the underwriters that are designed to increase the aftermarket stock price. The price stabilization or price support by underwriters after the IPO curtails the negative returns (Hanley et al., 1993; Ruud, 1993; Schultz and Zaman, 1994). Benveniste et al. (1996) hypothesize about stabilization activities, "(stabilization) effort is ordinarily undertaken by posting a stabilizing bid at the offer price in the secondary market," and Benveniste et al. (1998). Prabhala and Puri (1998) hypothesize that underwriters are more active in aftermarket activities for less risky IPOs.

Hanley, Kumar, and Seguin (1993) suggest that price support allows underwriters to disguise overpriced offerings from investors by temporarily inflating the stock price. They argue that "if a price drop [after IPO] is apportioned over a number of days, the perception of overpricing may be obscured by intervening market moves or information stocks, thus concealing the overpricing from the underwriter's clients (both investors and issuers)."

The third indication of price support is motivated by Ruud (1993) and Prabhala and Puri (1999). They document that the distribution of initial returns is almost censored at zero with an unusually low probability of negative returns. Both studies suggest that these patterns are caused by stabilizing transactions aimed at preventing the market price from dropping below the offer price (See also, Lewellen 2006). Based on this reasoning, Prabhala and Puri (1999) propose an indicator variable as a measure of price support that is equal to one if the IPO closes the first trading day at the offer price (stabilized) and is equal to zero if it closes below the offer (not stabilized). The most important beneficiaries of

the price stabilization in after-market trading seem to be the institutional investors who participate to the book building of IPO (underwriters). A significant indicator for price stabilization is the retention of stocks for underwriters after few days from the trading start point. The leader underwriter is an important market maker after few days from launching and his contribution to price support is notable.

Aggarwal (2000) points out that the short run underpricing and long run overpricing continue to be a puzzle, (See also, Beatty and Ritter 1986, and Miller and Reilly 1987) for short-run performance; (See also, Aggarwal and Rivoli 1990, and Ritter 1991) for long-run performance; and (See also, Asquith, Jones, and Kieschnick 1998, and Ruud 1993) for distributional properties of IPOs in the short run. And underpricing refers to the initial trading of IPOs above the offer price in the immediate aftermarket, whereas overpricing refers to long-run underperformance. Aggarwal and Conroy (1999) and, Aggarwal (2000) posit that the aftermarket activities are price-influencing activities that effect both issuers and investors. Aggarwal, Krigman, and Womack (2002) offer that managers strategically underprice IPOs in order to attract interest from analysts and the media, thereby building price momentum. And, Stabilization of an IPO's secondary market price usually involves one or more of the following practices: Stabilizing bids (Pure Stabilization), Penalty bids, Syndicate short positions (Short Covering). She finds out that pure stabilization, in which an identified stabilizing bid is posted, is never done, and that aftermarket short covering is the principal form of stabilization. And she says that aftermarket short covering leads to the same results as "pure" stabilization but has no disclosure requirements. The short position must be taken ex-ante, before trading starts, so they do find that sometimes short covering has to be done in the aftermarket even for IPOs that go up in price. Underwriters cannot predict completely which offerings will trade above or below the offer price. She also find out that, on average, aftermarket

short covering is not expensive for underwriters and amounts to a very small proportion of the gross spread they receive. The penalty bids are used selectively and tend to be assessed only for weak offerings. The underwriter can manage the price stabilization process by the combined use of covering the short position in the aftermarket, exercising the overallotment option, and restricting flipping by using penalty bids. The availability of these various options limits the losses incurred by the underwriter. And, she concludes that underwriters manage the stabilization process and limit their losses by using a combination of short covering in the aftermarket, penalty bids, and exercise of the overallotment option. These activities are relatively inexpensive overallotment option because the underwriter can manage the process. And, she finds out that instead that aftermarket activities are less transparent and include stimulating demand through short covering and restricting supply by penalizing the flipping of shares. Aggarwal (2000) shows that underwriter almost always oversells the issue and start the first trading day with a short position. They have an option to cover this short position in the aftermarket or to purchase up to 15% of shares offered from the issuer. According to Ellis et al. (2000) and Aggarwal (2000) that the strongest share repurchases of cold IPOs, presumably by the lead underwriter, take place on the first trading day but that inventory build-up continues after day one. (See also, Schultz and Zaman 1994, Benveniste, Erdal, and Wilhelm 1998, Chowdhry and Nanda 1996, Benveniste, Busaba, and Wilhelm 1996, Prabhala and Puri 1999, Aggarwal 2003).

Lewellen (2006) suggests three explanations for the results: First, retail banks might value price support because it allows them to discriminate among investors: a promise to repurchase weak IPOs can be targeted to specific investors. Second, Hanley et al (1993) suggests that underwriters support prices to disguise weak offering from initial investors. If such tactics indeed take place, they are probably targeted at unsophisticated investors and therefore may be favored by retail

banks. Third, it is possible that retail banks suffer larger reputation damage from ex-post overpriced IPOs.

The literature suggests two reasons why discrimination could be important; First, Chowdhry and Nanda 1996 argue that price support is a put option given specifically to uninformed investors to compensate them for the winner's curse. Second, Benveniste, Busaba, and Wilhelm (1996) suggest that price support is offered selectively to institutional investors in exchange for information is the pre-offering period.

### **Tax Arguments**

Taxation is another factor identified by the theory based on institutional and legal aspects of IPO. In few countries, the level of taxation for employment is higher the taxation applied to the capital gains. So, the companies prefer as remuneration to issue new stocks on the capital market through IPO mechanism and to allocate a part of issued for their employees.

Rydqvist (1993) referring to the Swedish market, points out tax-driven benefits in underpricing shares. Loughran et al. (1994) explain the huge level of IPOs underpricing in emerging markets invoking institutional binding rules. Perhaps surprisingly, underpricing may be advantageous from a tax point of view. Rydqvist (1997) explores this possibility in the context of Swedish IPOs. The argument is simple. Before 1990, Sweden taxed employment income much more heavily than capital gains. This created an incentive to pay employees by allocating appreciating assets in lieu of salaries. One such appreciating asset is underpriced stock, allocated preferentially to the firm's own employees at the IPO. In 1990, the Swedish tax authorities made underpricing-related gains subject to income tax, removing the incentive to allocate underpriced stock to employees. Underpricing then fell from an average of 41% in 1980-1989 to 8% in 1990-1994.

A similar argument is put forward by Taranto (2003). A quirk of U.S. tax laws may increase

senior managers' incentive to underprice their company's IPO. Holders of managerial or employee stock options pay tax in two steps. First, when they exercise the option, they pay income tax on the difference between the strike price and 'fair market value'. Second, when they eventually sell the underlying stock they acquired at exercise, they pay capital gains tax on the difference between 'fair market value' and the sale price. Since the capital gains tax liability is deferred, and since capital gains tax rates are typically lower than income tax rates, managers prefer 'fair market value' to be as low as possible. U.S. tax law considers 'fair market value' for options exercised in conjunction with an IPO to be the offer price, rather than the price that will prevail in the market once trading begins. This then generates an incentive to underprice.

While it is unlikely that tax alone can explain why IPOs are underpriced, the tax benefit from underpricing may help explain the cross-section of underpricing returns. Taranto's (2003) empirical results are generally consistent with this argument, in that they show companies to be more underpriced the more they rely on managerial and employee stock options. However, it is possible that boards award stock options to protect managers from dilution in anticipation of the underwriter underpricing the stock. Thus the direction of causation is unclear.

### **Conclusions:**

1. Legal framework, specifically the extent of investor protection, is a crucial determinant of IPO activity and other measures relevant to equity markets. Some researchers believe that firms intentionally underprice their shares as a form of insurance against future litigation. The issuers, under advice of the underwriters, agree to set the offer price below the expected market value to reduce the probability of litigation and costs of litigations.
2. Tinci (1988) provides the first empirical test of the lawsuit avoidance hypothesis, and he has proved that in US, the underpricing has

reduced the probability of lawsuits as well as the amount damages that plaintiffs can claim. This model has been supported by many stock market analysts. Whereas, Drake and Vetsuypens (1993) claim that a underpricing does not reduce the probability of a lawsuit. They find that underpriced IPOs are just as likely to be sued as overpriced IPOs and that there is no significant difference in underpricing between sued and non-sued firms. It has been concluded by Prabhala and Puri (1999) that the difference in underpricing between Tinic (1988) pre-1933 and post-1933 IPO sample is likely caused by differences in risk without recourse to potential differences in legal risk enforced by the Securities Act of 1933.

3. Lowry and Shu (2002) have argued in 2002 that plaintiffs may preferentially seek out IPOs underwritten by try reputable underwriters as they tend to have deeper pockets. This argues by Michaely and Shaw (1994) that larger firms should be more underpriced between larger issues may be harder to sell. In legal matter, the amount of damages that can be awarded in lawsuits filed under section 11 of the Securities Act 1933 in the difference between the offer price and the subsequent trading price.
4. Lowry and Shu (2002) have studied two implications of the lawsuit evidence hypothesis; the insurance effect of the deference effect of IPO underpricing. Under the insurance effect IPO firms associated with higher litigation risk should underprice their shares more to avoid being sued. Under the deference effect higher levels of underpricing reduce the probability of litigation for possible misstatements or omissions in the IPO prospectus. Whereas, Turtle and Walker (2004) have used a sample of IPOs filed in the US between 1996 and 2000 and find no support for the lawsuit avoidance hypothesis in a simultaneous equation framework. They

do not reject the hypothesis but point out that it has become less important in the US in recent years.

5. Price stabilization makes the IPO process more efficient because it encourages the underwriter to produce more information about the IPO before the offering (Lower uncertainty about the IPO value makes the put option less valuable). The additional information reduce adverse selection problems at the offerings stages improves liquidity in the aftermarket. Underwriter can reduce the average amount of underpricing, therefore increasing the expected proceeds of issuing firms, by favoring regular investors who provide information about their demand that is useful in pricing an IPO. Shares can be allocated to those who are likely to be buy-and-hold investors, minimizing any costs associated with price stabilization activities. Furthermore, underwriter discretion can completely eliminate the winner's curse problem if underwriters allocate shares in hot issues only to those investors who are willing to buy other IPOs.
6. Price stabilization is done by covering short in IPO shares taken by the underwriters at the time of the offering. The most important beneficiaries of the price stabilization in after-market trading seem to be the institutional investors who participate to the book-building of IPO (underwriters). A significant indicator for price stabilization is the retention of stocks for underwriters after few from the trading start point. The leader underwriter is an important market maker after few days from launching and his contribution to price support is notable. Price stabilization has stressed its role in reducing underpricing by standing ready to buy back shares at the offer price. Price stabilization as share purchase made by the underwriters that are designed to increase the aftermarket stock price. Price stabilization retards the price discovery process in the

secondary market for an IPO; its effects might plausibly comprise some combination of risk transfer, risk reduction, and enhancement of the efficiency of a book building effort; the available evidence suggests that price stabilization is implemented by way of relatively opaque mechanisms. Price stabilization is substantial, inducing significant price rigidity at and below the offer price. Many studies suggest that stabilization helps to mitigate information asymmetry problems in the IPO market, but no evidence with larger information asymmetries.

7. The characteristics of the lead underwriter emerge as the strongest determinants of price support. Larger and more investment banks stabilize more, perhaps to protect their reputations with investors. But there are substantial differences in price support even among the largest underwriters. Investment banks with retail brokerage operations stabilize much more than other larger investment banks.
8. Taxation is another factor identified by the theory based on institutional and legal aspects of IPO. In few countries, the level of taxation for employment is higher the taxation applied to the capital gains. So, the companies prefer as remuneration to issue new stocks on the capital market through IPO mechanism and to allocate a part of issued for their employees. Taxation also plays an important role in IPO underpricing. The tax benefit from underpricing may help explain the cross-section of underpricing returns; however, the direction causation is unclear. In some countries where capital gains tax is less than corporate tax the issuers make preferential allotment of IPO to their employees. However, if the government increases the capital gains tax, the benefit disappears. However, as the capital gains tax is lower than the income-tax, the employees prefer underpriced IPO. It defers their tax liability.

9. Tax advantages to IPO underpricing depending on their situation, managers may prefer more or less underpricing. Holders of managerial or employee stock options pay tax in two steps, first; when they exercise the option, they pay income tax on the difference between the strike price and 'fair market value'. Second, when they eventually sell the underlying stock they acquired at exercise, they pay capital gains tax on the difference between 'fair market value' and the sale price. Tax liabilities can account for a discount of no more than 6 percent.
10. The tax explanation argues that capital gains tax liabilities or unrealized appreciations (at the fund level) are not captured by the standard calculation of NAV. The NAV of a closed-end fund does not reflect the capital gains tax that must be paid by the fund if the assets in the fund are sold. The tax liabilities associated with assets which have appreciated in value would reduce the liquidation value of the fund's assets.

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# Inclusive Higher Education Through Earn and Learn

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## Abstract :

The economic growth and the literacy rate shows high correlation for various countries. The embodied growth model observes that it is the human capital which contributes more than the physical capital and determines the national welfare also. India recognized the role of education and put high priority for spreading the education. But the spread of education in general and of higher education in particular remained a distant goal. The present structure of highly subsidized higher education remained the monopoly of few lucky students. The gross enrollment in higher education is only 10 per cent. The model of higher education funding with state leadership needs a critical review.

The alternative mechanism to finance the cost of education is in the form of labor as pioneered and practiced by Karmaveer Bhaurao Patil and in 1950 was followed partially in Shivaji University. In this system the student works and pays the fee in the form of labor. This helped to promote the participation of poor but meritorious students in the form of Learn and Earn Scheme. The scheme is followed in other universities also.

In this paper the economic analysis of the Labor scheme is made which highlights that it is the student who subsidizes the university and not the university. The contribution made by the students is greater than the benefits he receives from the university. Moreover the performance of students in academic field is also noteworthy. The scheme benefited the poor and meritorious students and the pass outs are heading top ranks and posts in different walks of life. The inclusive higher education where the meritorious and poor student gets access to education is the sustainable model of higher education.

**Keywords:** Inclusive Growth, Earn and Learn, Benefit Cost Ratio.

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## Introduction

The inclusive education is a pre condition for socio economic growth of the country. It is well

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documented in the history of various countries. The countries like Japan and China in Asia and number of countries in Europe accorded highest priority to education which resulted in higher growth of these countries. In ancient India the education was the monopoly of the Brahmin class and rest of the society was excluded from education due to the water tight compartments of caste. The beginning of British rule resulted in spread of modern education. The motive of British rulers was to create a supportive clerical staff to the British Empire. But the benefits of education in formal type created a class of social and political reformers. The fruits of education were well recognized by the native Kings and the Princely states like Kolhapur. Baroda took active interest

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in spreading the education for the people. Rajarshi Shahu of Karvir state declared that, "I will give my entire state as a prize if my citizens get primary education." The work of social reformer Mahatma Jyotirao Phule and Dr. B.R. Ambedkar inspired Bhaurao Patil to work for the downtrodden through spread of education. He started his educational experiment on a new line in 1919 with earn and learn model. In the present context of making education inclusive for all and attaining the Millennium Development Goal the model of Learn and Earn offers solution to various issues in education.

In the present paper the first section deals with the present position and policies of Indian government on the background which the model of Labor scheme or Earn and Learn is presented. The last section summarizes the findings and policy implications in terms of launching Labour University.

## **Section 1**

### **Educational Scenario in India :**

The institutional framework of higher education in India is complex .There are several types of institutions: universities, colleges, institutions of national importance, post-graduate institutions and polytechnics. At present there are 20 Central universities, 217 State funded universities, 57 private universities, 45 deemed universities and 13 Institutes of national importance. Despite quantitative expansion the educational sector in general and higher education in particular suffers from various drawbacks. The World Bank has identified the vital issues in higher education.

### **Issues in Higher Education**

The World Bank study has identified the following issues related to the higher education in India:

- a. Over-centralization and lack of autonomy and accountability
- b. Resource constraints and wastage
- c. Poor quality and relevance in many institutions
- d. Difficulties in retention of Science and Technology personnel in education

- e. Poor technology and infrastructure support
- f. Limited access and regional disparity.

The low level of Gross Enrolment Ratio in higher education along with poor quality has posed a serious challenge to the policy makers. This concern has been expressed by many expert committees. The National Policy on higher education of 1986 translate the vision of Radhakrishnan and Kothari Commission in five principles goals for higher education which include Greater Access, Equal access (or equity), Quality and excellence, Relevance and promotion of social Values .

### **Expansion in Higher education Institutional Capacity**

The number of universities has increased from 20 in 1947 to about 357 in 2005 indicating a thirteen-fold increase. There are now 20 Central Universities, 217 State Universities, 106 Deemed to be Universities, and 13 Institutes of National Importance established through Central legislation .The number of colleges increased from 500 in 1947 to 17,625 in 2005, indicating twenty-six-fold increase. In the spheres of technical education by 2004 we had about 1265 engineering and technology collages, 320 pharmacies, 107 Architecture, 40 hotel management, making a total about 1749 institutions. In respect of post graduate educational institutions there are 958 MBA/PGDM and 1034 MCA in 2004. Similarly the number of teachers has increased from 700 in 1950 to 4.72 Lakhs in 2005.

### **Present Status with respect to Access - Enrolment at Aggregate level :**

The higher education in India shows various forms of non inclusion of different segments indicated by urban rural differences, interstate variation, gender differences and caste differences. In 2003-04, the GER was about 13.22% at over all level. There are significant disparities in enrolment ratio between rural and urban area. In 2003/4 the GER for rural and urban area was 7.76% and 27.20% respectively-GER in urban area being four times higher compared with rural area. There exist

considerable inter-state variation in the level of higher education. While the GER at aggregate level is about 13%, it is more than national average in state like Nagaland (38.6%), Goa (27.3%), Kerala (24.2%), Manipur ( 24.7%), H.P.(20.0%) and J&K, T.N. and Pondicherry (with 18%). By national comparison the GER is lower than the national average in state like Tripura (3.2%), Assam (6.6%), Meghalaya (7.2%), Chattisgarh (7.6%), Orissa (8.2%), Jharkhand (10.3%), West Bengal (9.7%), Bihar (10%), Sikkim (10.8%), and Rajasthan (11%).

There are significant disparities across social groups also. The GER is much lower for ST, SC, and OBC as compared with others (that is non-SC/ST/OBC), its being 5%, 7.51%, 11.34% and 24.89% respectively. Thus the GER for ST was five times, of SC about three times and of OBC about two times less compare with non-SC/ST/OBC population. For instance, as against the GER of 15.57% for general Hindu population (non -SC/ST), the GER for SC and ST was 8.39% and 7.46% respectively. The GER for the general Hindu population being higher by about two times compared with SC and ST.

The access to higher education is also low for girls as compared with boys. The GER being 15.25% for male and 11% for female. Gender disparity in enrolment ratio is mainly because of visible differences in rural areas. In urban the gender differences are minimal. Poor -Non poor There are also significant differences in enrolment rate among the poor and non-poor .In 1999-2000 the GER for the poor was 2.4 % as against 12.91 % for non-poor ,the average being 10.10% .The GER for the poor was almost twelve time lower compared with non poor.

### **Challenge of Quality and Excellence**

Quality of University and College education system:

As far as the quality is concerned the UGC has laid down indicators under provision of what it called, 2(f) and 12 (b). These two together assess the minimum quality requirement to provide the

grants to the universities and collages. Thus of about total of 14000 colleges about 40% are recognized under 2(f) and about 38% under 12(b). Alternatively, it means that about 60% of colleges (equivalent to 8411) in the country are not assessed even with the minimum criterion of 2(f) and 12 (b) (equivalent to 8727). Therefore, we cannot comment on the quality of almost 60% of the colleges coming under the purview of UGC. But accredited colleges account only 18% of the total colleges (i.e. 14000), which fall under the purview of UGC. Thus we don't have much idea about 82% of the 14000 colleges in the country with the elaborated criterion of measurement of quality of NAAC.

The educational scenario of India shows positive trend regarding quantitative expansion both at primary , secondary as well as at higher education level. Despite this quantitative growth the educational system failed in providing inclusive education to the large section of population. The high dropout rate, low enrollment of girl students, backward class students and rural students poses a serious challenge for the Indian policy makers. There is an urgent need for improvement in quality of education on the background of current global competition. This challenge can not be addressed merely through government sponsored and funded programs. It needs more innovative, society oriented as well as cost effective method for imparting the goals of education. The present higher education burdened with large number of learners and low allocation of funds can be supplemented and later on substituted with the Earn and Learn model of higher education.

### **Methodology :**

The present study is based on the experiment of Earn and Learn model practised by two universities in Maharashtra ( India).The beginning of the scheme was made in Shivaji University Kolhapur and then it was followed in Dr. Babasaheb Marathwada University Aurangabad. The scheme received positive response from students and succeeded in producing galaxy of

students working in different walks of life. We have made study of 200 students participating in the scheme from both universities with equal number of girls and boys in the sample. Thus it is sample of 200 respondents with 100 girls and 100 boys. The data pertains for the two academic years 2008-09 and 2009-10. The data collected through questionnaire is processed with simple statistical tools such as percentage, ratio and correlation method.

In order to measure the contribution of students we used shadow price method. Here the contribution of the students is equal to the money which would have been spent if these students work would have been carried out with direct employment of staff.

For the cost on students by university we consider the monetary value of the facilities provide by the university. In order to make the benefits and cost of the scheme we adjusted the work and benefits in monetary terms.

Finally the hypothesis regarding the scheme is tested with net benefits or burden of the scheme.

### **Hypotheses:**

The study examines following alternative hypothesis

- 1) The working of Earn ad Learn scheme benefits the students
- 2) The Earn and Learn scheme benefits to university also
- 3) The scheme is economically viable.

### **Result and Discussion :**

#### **1) Profile of students :**

The socio economic features of the students participating in the scheme shows following results

- 1) The students participating in the scheme are mainly from poor income category with average family income of less than 50000/ (62 %) followed by family income of Rs 75000/ (28 %) and only 10 % with family income of Rs 10000/

- 2) The caste composition shows that the participant students belongs to open category 60 % and backward category 40 %
- 3) In the occupational structure of the parents of the students 80 % students belong to farming community.
- 4) The average distance from residence shows that in the case of Shivaji University it is 50 km and for BAMU it is 134 km which shows that in BAMU the students form larger radius seek admission to this scheme.

#### **2) Activities under the Scheme :**

The labour scheme of Shivaji University named after the first vice Chancellor of the University, Dr. Appasaheb Pawar is slightly modified to suit the requirements of the post graduate students. The students are required to work for 4 hours in a day and for 6 hours on holidays. The work allotted to the students is of semi skilled in nature. The activities under taken in the Shivaji college, Satara are also under taken in the labour scheme of the Shivaji University. Moreover the students are given work in the library for maintaining and exchanging the books. A Photocopying centre is also started to provide the photocopying facility to the students. Gents hostel mess is also run by the labour scheme students. The students supply the milk to the campus residents.

The Earn and Learn scheme offers various economic activities to the students. The university authorities have tried to find out different avenues to employ the students in a gainful way. Here is a brief account of various activities.

1. Plantation of fruit trees & Sale of Fruits:-
2. Vegetable cultivation & Sale:-
3. File making
4. S.T.D & P.C.O Centers
5. Photocopying Center:-
6. Jatrapha Plantation Project:-
7. Sericulture Project:-
8. Production of Earthworm eggs & Earthworm Manure :-
9. Tamarind Cultivation Project

### 3) Benefit Cost ratio of the Scheme:

The economic viability of any scheme determines the long term future of the scheme. The Earn and Learn scheme offers immense tangible and intangible benefits to the students at micro level and to the family and society at macro level. An important aspect of labour scheme is that it makes the poor students self reliant and instils dignity. As the benefits and cost shows that the cost benefit ratio is favourable and hence it justifies the scheme is economically viable.

#### Benefits to the University:

The university benefits from the scheme with the availability of labour required for its working. The university undertakes some activities to provide work to the students which further generates income to university. In order to make the calculation simple by assuming that the university saves its wage bill by not employing labor from market and replaces this student's labor. So the benefit from student is saving in wage bill.

#### Cost to the University:

The university provides concessions in the form of free hostel, free mess, no examination and other fees or it may give direct money to the students. Apart from this direct expenditure on students the university spends for administration of the scheme and capital expenditure such as building and machinery. The university makes budgetary provision for earn and learn scheme. The actual spending on the scheme is less than the proposed provision. So the actual spending is taken as the cost of the scheme.

#### Benefits to the Students :

The scheme is designed to benefit the poor and needy students. The student gets an access to education due to the scheme. The student gets free education, free boarding and lodging in Shivaji University while in BAMU the student gets Rs. 12/ per hour for his work. On an average he gets monthly Rs 800/ to Rs 1000/ for his maintenance. Here the student pays the fees and pays the hostel and mess bill.

#### Cost to the Student :

There is no direct money cost to the students. But the student pays in terms of labour. The labor hours he offers is the physical or real cost to the student. Alternatively the opportunity cost of the student is found by observing the value of labour in market. The prevailing wage rate for semi skilled worker can be taken as proxy for the market value of work done by the student.

Formula for measuring BCR requires following measurements.

- 1) Yearly Total Work Done (hrs)= 4hours a day \* Monthly 25 days \* 10 Months of year \* No. of Student ( For Shivaji University)
- 2) Yearly Total Work Done (hrs)= 3hours a day \* Monthly 25 days \* 10 Months of year \* No. of Student ( For BAM University)
- 3) Average Cost of Work per hour in Rs = Expenditure on scheme by university is divided by Work done
- 4) Total market value of Work in Rs = Work done in hours \* Average/ Market rate per hours (i.e. Rs.30/hours)

#### Differences in the Working of the Scheme:

The Earn and Learn scheme is implemented in both Shivaji university as well as in Dr Babasaheb Marathwada university. The benefits of the scheme to the students differs in the following way

#### A) Shivaji University, Kolhapur :

The students of Shivaji University Kolhapur get the following facilities under the labour scheme:

- Free hostel facility.
- Free mess facility.
- Free education.
- Free medical facility

#### The monetary value of these facilities is as under:

1. Hostel charges @ Rs per term Rs 2000/
2. Mess charges @ 500 for 10 months = Rs 5000/
3. Examination charges @ 1000
4. Medical facility @ Rs 500 for year

**B) Babasaheb Ambedkar Marathwada University Aurangabad :**

In the case of BAMU the student is paid Rs.12/ Per hour and works three hours a day which results in approximately Rs.800/ benefit to a student per month.

Along with these monetary benefits the student gets work experience which helps him in future job.

In the case of BAMU the students get monetary remuneration for their work.It is paid on hourly basis for which the rate was Rs 10 in year 2000 and revised to Rs 12 in year 2007. From this the student gets Rs 800/ from which he manages his cost of education.

**4 ) Benefit Cost Ratio of the Scheme :**

The economic viability of the scheme is determined by its benefit cost ratio (BCR). The

benefits of the scheme are both to the university as well as to the students. The scheme also benefits to the society at large in terms of better manpower. The scheme produced leaders in various fields with commitment to the downtrodden. The helping hand given by the alumni of the Earn and Learn Scheme has helped new generation to put their footings on right track of life. However these social benefits, though very vital, are difficult to measure. Hence we concentrate on the measurement of benefits to university and to the students.

In the following table the Benefit Cost Analysis for Shivaji University is presented

**Table 1 Benefit Cost Analysis for Shivaji University**

Year	No. of Students	Work Done in HRS	Average Cost of Work	Benefit of Work	Expenditure	BCR
2006-07	71	71000	24.26	2130000	1722386	1.236657
2007-08	50	50000	37.09	1500000	1854341	0.808913
2008-09	50	50000	34.5	1500000	1725058	0.869536
2009-10	92	92000	19.05	2760000	1752371	1.575009
<b>Average</b>	<b>65.75</b>	<b>65750</b>	<b>28.725</b>	<b>1972500</b>	<b>1763539</b>	<b>1.122529</b>

In the table no the cost benefit ratio for the Shivaji university shows following trend

1. The university has incurred an expenditure of Rs 17.64 lakhs with the benefit of Rs19.72 lakhs.
2. The BCR is positive on an average with 1.12
3. The number of students was with an average of 66 but there is fall in admission in the year 2007 and 2008.
4. The lower intake affected adversely BCR in those years
5. The average cost of work is Rs 28.72 which is lower than the market wage rate of Rs 30/ per hour.

The scheme needs to be evaluated from students point of vies .The BCR from students point of view for Shivaji University is presented here.

**Benefit Cost Ratio for Students of Shivaji University, Kolhapur :**

In the following table the Benefit Cost ratio of Shivaji University is presented.

**Table 2 : Benefit Cost Ratio for Students of Shivaji University Kolhapur**

No. of Students	Work Done in HRS	Average Cost of Work	Benefit of Work	Opportunity cost	Contribution	BCR
71	71000	30	1065000	2130000	1065000	0.5
50	50000	30	750000	1500000	750000	0.5
50	50000	30	750000	1500000	750000	0.5
92	92000	30	1380000	2760000	1380000	0.5
65.75	65750	30	986250	1972500	986250	0.5

In the table no the Benefit cost ratio is measured from student point of view.

The student gets benefit in terms of free hostel and mess as well as fee concessions. These benefits if converted in cash come to Rs 15000/ per student. So the scheme benefit to student is computed as

Benefit to student: No. of Student x Rs 15000/

The cost of student is the opportunity cost of labor. If the same labour is sold in the labour market the student will get wage rate @Rs 30/ per hour. So the opportunity cost is

Opportunity cost = Wage rate X work done

The difference between the opportunity cost and the benefits to the student is contribution to the university or it is the net benefit to the university.

The BCR for students shows that the student of the scheme is contributing to the university more

than the benefits he receives and hence he has BCR as 0.5

The students of Earn and labour scheme contributed to the tune of Rs 986000/ .

Benefit Cost Ratio for Dr. Babasaheb Ambedkar University ( BAMU):

The Learn and Earn scheme named as Vasant Rao Kale Swabhiman Shikshana Yojana of BAMU makes a budgetary provision for the scheme and list of students interested in the scheme is prepared. The students are allotted work by the coordinator. Although large number of students apply for the scheme the actual turnout is low due to low remuneration per hour paid. Following table shows the budget allocation to the scheme.

**Table 3 Dr. Babasaheb Ambedkar University's Budget allocation for Scheme**

Year	No. of Students	Budget Rs	Full time No	% of Full time no to applicant
2006-07	500	2200000	254.62963	50.9259259
2007-08	460	1700000	196.759259	42.773752
2008-09	461	1000000	115.740741	25.1064514
2009-10	320	700000	81.0185185	25.318287

**Following observations emerge from the table**

- 1) The budgetary support is falling over the period.
- 2) The response of the students is also falling.
- 3) The students getting work under the scheme is only 25 % in the last two years as it was 51% in the year 2006.

**BCR for BAMU:**

For the measurement of benefit to the university adopted the same method adopted for Shivaji university is followed. However we have measured these benefits with full utilization of student labour and actual use of students labour

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Actual Benefit to the University = (Market wage rate - university wage rate X actual labour hours)

The benefit cost ratio for BAMU is shown in the following table

Actual cost to the university = Rs spent on the wage bill of students

**Table 4 the benefit cost ratio for BAMU**

Year	No. of Students	Cost Rs	Benefit ( Rs)	BCR
2006-07	500	2200000	3299994	1.49
2007-08	460	1700000	2550006	1.5
2008-09	461	1000000	1499994	1.49
2009-10	320	700000	1049994	1.49

The data presented in the table above leads us to following observations

1. The university had a very strong Benefit Cost ratio of 1.5
2. The response for the scheme in terms of inclusion of students in falling
3. The benefit in actual term shows a trend of decline.

opportunity cost for him is the income he could get in the labour market which is assumed at the rate of Rs 30 / per hour.

The total benefit is the sum of the university spent on students and the cost is the opportunity cost of this labour is measured. Following table shows this BCR for students of BAMU

**Benefit Cost ratio for Students :**

The student of this scheme benefits in terms of income at the rate of Rs 12 per hour. But the

**Table 5 BCR for students of BAMU**

Year	No. of Students	Benefit( Rs)	Cost( Rs)	BCR
2006-07	500	2200000	3299994	0.66
2007-08	460	1700000	2550006	0.66
2008-09	461	1000000	1499994	0.66
2009-10	320	700000	1049994	0.66

The BCR for BAMU students is 0.66 indicates that the students cost in terms of opportunity income sacrificed is higher than the benefits received. The scheme is not responded positively by the student community is due to adverse BCR.

**Findings and Policy implications:**

The study of two universities implementing the Earn and Earn scheme on the background of the challenges of managing human capital leads us to following conclusions:

- The education sector in India made significant progress in creating a wide network of educational institutes for primary to university level.
- The growth in terms of inclusive education is far from satisfactory level as the present education system has resulted into existence of gender and caste differences in terms of access to education.

- The qualitative dimension of education in terms of basic amenities, attainment of its goal and its impact also leaves much scope for improvement.
- The experiment of Earn and Learn schemes of the two universities shows that this scheme helps in making the education inclusive as every student in the scheme pays his cost through his labour. The scheme succeeded in creating positive impact on the learners as well as on the society with committed human capital in various fields.
- The economic analysis also justifies the spread of the scheme as the BCR or Benefit Cost Ratio is positive.
- The student benefits in terms of access to education and development of holistic human being with strong commitment for virtues of education.
- The university benefits more in terms of availability of labour force, saving in terms of cost and serving the needy and meritorious students of its region.
- The experience of Shivaji University, Kolhapur and Dr. Babasaheb Ambedkar Marathwada University, Aurangabad needs modifications in the scheme. The scheme of Shivaji University needs expansion in inclusion and extending monetary benefits to students. The petty expenses of the students requires some cash help also.
- For Dr. Babasaheb Ambedkar Marathwada University of Aurangabad the scheme needs revision of hourly rates to make the full compensation for the expenditure of education.
- As the university has more benefits than the student it can offer more benefits to students and other universities can follow this as role model.
- All the points discussed above makes a case for following this scheme as alternative way

for financing higher education and making higher education inclusive.

### **Towards Labour University :**

The present educational sector in various countries is market based and makes higher education monopoly of the rich class. The exclusion of meritorious but poor students results in huge loss for the country in terms of human capital. The concept of using unskilled manpower in the form of disguised unemployment was propounded by Ragnar Nurkse to break the vicious circle of poverty. Now the time has come to transform the non inclusive educational sector to inclusive one through the Labour University. The successful implementation of the scheme will create a positive impact on labour market and fulfill the dream of millions to share the prosperity. The MDG goal can be attained by using labour university as an effective tool.

The funding of higher education through Earn and Learn is practiced in other countries with different formats. But the scale is limited. This scheme is very relevant for the poor countries and for the poor people to make education and development process inclusive. The subsidy based models have their own limitations as it is evident in the countries like India. The Earn and Learn Scheme if extended with collaboration of private sector or corporate sector where the work of corporate sector can be shared with students can become an instrument for effective employment generation. The experience of the two universities needs to be taken further to form a separate university which provides education to the students by using Earn and Learn model.

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# A Study of Management of Sheep Rearing Occupation in Satara and Sangli Districts of Western Maharashtra

Tulshiram D. Mahanawar

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## Abstract :

This research paper is an attempt to study the management of sheep rearing occupation in Satara and Sangli districts of Western Maharashtra in order to identify management practices of traditional sheep herders. Livestock is an integral part of the farming system of India. Sheep is important species of livestock for India. Sheep rearing activity provides self employment to sheep farmers. It provides meat, wool, manure, milk and skin to the society sheep itself has export potential and also a potential for sheep products. But this vocation is being done on traditional approach, so they bear heavy losses due to natural calamities and epidemic disease. It is the need of the year; that this sheep rearing should be done by using proper management techniques for the economic survival of the community engaged in this occupation.

**Keywords:** Deccani Sheep, Drought Prone Area, Sheep Farmer, Sheep Flock, Madgyal Sheep, Migration, Vaccination. FecB

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## Introduction:

Live stock is an integral part of the farming system of India. It is supplementary to crop farming. It is indeed a wealth in terms of genetic diversity and germplasm. Sheeps are important species of livestock for India. They contribute greatly where crop and dairy farming is not economical and play an important role in livelihood of large proportion of small and marginal farmers and landless labourers.

Maharashtra, having 30.64 lakhs sheep population and is on 6<sup>th</sup> rank in India. Maharashtra sheep husbandry business has proved profitable as well. Meat production from sheep was nearly 25000 metric tons every year and it was 11% to total meat production in Maharashtra. Nashik, Satara, Pune , Ahmednagar, Sangli , Solapur and Kolhapur are the leading districts in sheep rearing occupation in the Maharashtra state.

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Sheep farming activity provides self employment to sheep owners. As per livestock census 2007, Satara and Sangli districts have 3.14 and 1.90 lakhs sheep population respectively and 7644 families are engaged in this occupation. Sheep rearing is done in 16.75 and 26.42 per cent villages in Satara and Sangli districts respectively. It has employment potential for the weaker sections of the society. Basically farmers of study area keep sheep flocks for financial support to their agriculture.

## Statement of the Problem:

Most of the sheep farmers are illiterate and are doing sheep rearing in traditional way. So they are unaware of the proper management of sheep farming and scheme of sheep and goat insurance. So they have to bear heavy losses due to mortality of lambs and ewes. Sheep farming is concentrated in drought prone talukas of Satara and Sangli districts. Most of sheep farmers in drought prone area migrate along with sheep flocks and families (In October to June every year) in irrigated area because of shortage of grass and water in summer season. Due to migratory nature of sheep farming they face lot of problems but they play important role in providing meat, wool, and leather to the

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society and organic manure to the agriculture sector.

Hence, an attempt has been made to study management of sheep rearing occupation and highlights the problems of the occupation and makes constructive measures to streamline them for the economic survival of the community engaged in this occupation.

**Objectives of the Study:**

The present study has the following objectives.

1. To study the management practices of sheep rearing occupation.
2. To suggest suitable measures for overcoming the problems of sheep rearing occupation.

**Hypotheses of the Study:**

The study is based on the following hypotheses and tested with the application of simple statistical techniques.

1. Most of the sheep farmers are illiterate and they are unaware of government and non-government agencies and their schemes.

2. Veterinary services for sheep are not adequate.
3. Majority of the sheep farmers have lack of business knowledge and techniques.

**Sample Design:**

There are 21 talukas in Satara and Sangli districts. Especially, the sheep farming occupation is concentrated in drought prone area.

This occupation is also done in irrigated area in selected villages of Satara and Sangli districts. As per Livestock Census 2007, Satara district has 3, 14,143 and Sangli district has 1, 90,112 sheep population and number of sheep farmers were 4556 and 3088 respectively. Total number of sheep farmers in study area was 7644.

Researcher has selected 10.33 per cent sheep farmers for the purpose of sampling. The selection of the sample was done in the following manner. Random sampling method was used for collecting information by way of interviews through schedule. For the present study samples have been taken from drought prone area and irrigated area.

**Table 1: Samples Selected from Drought Prone and Irrigated Area of Satara and Sangli Districts.**

Sr .	Name of the Taluka	No. of Samples	
		Drought Prone Area	Irrigated Area
1	Man	135	-
2	Phaltan	125	-
3	Khatav	55	-
4	Khandala	60	-
5	Jat	100	-
6	K. mahankal	60	-
7	Atpadi	95	-
8	Satara	-	25
9	Koregaon	-	20
10	Wai	-	20
11	Karad	-	25
12	Miraj	-	30
13	Walava	-	20
14	Palus	-	20
	<b>Total</b>	<b>630</b>	<b>160</b>

Source: (Primary Data)

Total number of sheep farmers taken from study area was 790 out of which 630 from drought prone area and 160 from irrigated area. The ratio of drought prone area to irrigated area is 4:1 as far as sample selection is concerned.

### **Review of Literature:**

In the Research paper 'Sustainable Use and Conservation of Deccani Sheep' by Nitya Ghotage (Feb-2007) explained that the Deccani breed of sheep is widely distributed in the Deccan plateau across three states i.e. Maharashtra, Andhra Pradesh, and Karnataka and is reared under migratory, semi migratory and sedentary system by shepherding community such as Golla, Kuruma, Kuruba, and Dhanger. Formerly used by these communities for meat, Manure and wool. Today this breed has been crossed with many other breeds, primarily as a result of inappropriate breeding policies. As also a collapse in the traditional wool markets triggered again by larger macro- policy reforms.

Jitender Bhatia, U. K. Pandey and K. S. Suhag (2005) in their research article entitled 'Small Ruminants Economy of Semi-Arid Region in Haryana.' They explain that high mortality in sheep and goats seems to be due to the lack of awareness among the sheep and goat farmers about diseases/ treatments, inadequate financial resources with them to meet out the health care services and treatments on the one hand, while inadequate disease diagnostic and disease surveillance services by the state government on the other.

A study by Singh (1987) on 'Farming pattern of sheep breeders' was conducted in 8 villages of ORP of Central Sheep and Wool Research Institute Avikanagar in Rajasthan to see economics of crop and livestock farming adopted by farmers in the

area, it revealed that the livestock contributed 47 per cent and agriculture 43 per cent to the total income of these breeders. Sheep, goat and bovine have contributed by 11.9, 22.3, and 23.2 per cent respectively to the total income.

Chanda Nimbkar (2009) presented research paper on "Case study on successful use of biotechnological for sustainable intensification of sheep rearing on the Deccan plateau in India". Dr. Chanda Nimbkar concluded that one copy of fecB led to an increase in live ovulation rate from 1.0 to 2.0 eggs and an increase in live litter size at birth from 1.0 to 1.6 in the NARI Flock and from 1.0 to 1.4 in smallholder flocks. Due to that introducing 33% increased in productivity. Twinning was thus introduced successfully in to Deccani sheep from Garole breed by introgression the fecB mutation of the animal's genotype at the fecB locus. Genetic improvement is permanent and therefore the best technology to improve productivity of smallholder flocks in remote areas.

B.V.Nimbkar & P. Ghalsasi (Nov-2008) presented paper entitled on 'Socio-economic study of smallholder sheep rears in Phaltan Taluka'. Sheep rearing was the major source of income for the families studied. Most of these families had small landholdings which allowed subsistence farming. The land was used to grow the family's grain requirements, rather than to grow fodder for their sheep. Of the families studied, 80% were above the poverty line, the average income per family being Rs.38000/- per year. 90 per cent of this income came from their sheep rearing occupation. In drought period they were not badly affected.

### **Management Practices of Sheep Farmers:**

Management practices of sheep farmers of Satara and Sangli districts are presented through table

**Table –2: Parameters of Management Practices of Sheep Farmers in Study area**

Sr.	Particulars	Drought prone area (%)	Irrigated area (%)	Average (%)
1.	Illiteracy.	58.16	60.0	58.90
2.	Untrained Farmers.	91.43	90.0	91.14
3.	Membership Of Sheep Breeders Organization	8.35	Nil	8.35
4.	Trend Of Maintaining Record Of Sheep Occupation.	30.15	31.25	30.37
5.	Trend Of Extra Feeding To Sheep During Nursing Period.	16.66	18.75	17.34
6.	Use Of Wool Shearing Machine.	1.39	Nil	1.39
7.	Pucca Shelter To Sheep	47.46	54.37	48.86
8.	Vaccination To Sheep	25.7	23.75	24.81
9.	Membership Of Sheep Farmers Insurance	12.0	10.64	11.34
10.	Twin Lambing	7.30	4.37	6.70
11.	Mortality Of Sheep (Up To 20% Mortality Among Flocks)	63.80	67.15	64.55
12.	Lamb Mortality (Up To 20% Mortality Among Flocks)	91.48	90.0	91.32
13.	Compensation For Sheep Death	2.88	1.88	2.27
14.	Insured Sheep Flocks	5.55	4.28	5.31
15.	Self Financing For Sheep Rearing.	79.04	68.12	77.46
16.	Trend Of Grass Plantation For Sheep.	39.36	23.13	36.07
17.	Traditional Caste Farmers.*	87.22	68.5	73.29
18.	Generation To Generation Sheep Rearing.	68.57	48.75	64.65
19.	Income Above Rs.80 Thousand.	20.0	3.14	16.58

Source- (Primary data)

\*Traditional caste farmers are Dhangar and non-traditional group include Ramoshi, Matang, Mahar, Chambhar, Mali and Maratha.

The above table shows the following implications

#### **Literacy of sheep farmers:**

Only 42.10% sheep farmers were literate and 58.90% were illiterate because of migratory nature of occupation. The small kids always accompany their family and some grownups help them in their sheep rearing. Thus they are disassociated from

society and school for more than six months during migration period and thus remain illiterate. Consequently they again become traditional sheep herders.

#### **Training of Sheep Farmer:**

Training is essential for each and every business activity. But most of sheep farmers (91%) have neither any type of training nor professional approach. Majority of them are interested in training but nobody contacted them about the

training. Very few sheep holders (9%) have attended one or three day training program as a formality. It is concluded that training aspect was neglected by Government and Non-Government Organizations.

#### **Sheep Breed & Trend of Twin lambing:**

Deccani, *Madgyal* and new strain of Deccani of *Nari-Suwarna* are the varieties maintained by sheep holders in study area. But near about 3/4<sup>th</sup> sheep flocks are Deccani, 17.72% are *Madgyal* and new strain of Deccani *Nari- Suwarna* found negligible. The period of migration ranges from 4 to 6 months in a year. The flocks penning in mixed nature, so 13% sheep flocks are of mixed type breed. So maintaining pure and original sheep breed is becoming difficult. Majority of the (71%) sheep flocks are found without the trend of twin lambing. Most of the sheep owners are ignorant about twin lambing character of new strain of *Nari-Suwarna* sheep.

#### **Sheep Breeder's Organization:**

Majority of the sheep owners (92%) are not concerned with the organization and have not formed any other breeder's organization.

#### **Unfavourable Trend of Maintaining Record:**

Maintaining proper record is a sign of good management of sheep farming occupation. But 70% sheep owners do not maintain any record. Only 30% have maintained rough record related to sale of lambs and ewes and expenditure on medicine and drugs etc. They do not have any knowledge about forecasting the future hindrances and problems properly.

#### **Trend of Extra Feeding:**

The energy availability to the female sheep is even less than the maintenance requirement. Due to shortage of required protein, sheep face the disease like pneumonia. Premature delivery of sheep and mortality of lambs occurs due to pneumonia. It is concluded that 83% sheep owners do not provide extra concentrated feed to pregnant ewes. Sheep farmers do not take care of pregnant ewes and nursing mother. It is observed that most of sheep

owners provide extra concentrated feed to lambs before sale for getting good price.

#### **Use of wool shearing machines:**

Very limited sheep owners are using wool shearing machines. Non availability of shearing machines and majority sheep farmers have not any information about existence of such type of wool shearing machines. So they are not using such type of machines. It is noticed that such machines are available in Sheep and Goat Development Corporations' Farms only.

#### **Arrangement for the Protection of Sheep:**

In order to increase the productivity of sheep, there is a need to make provision of shelter to pregnant ewes, young lambs and breeding rams against inclement weather conditions and wolf attack on sheep. Housing space should be provided at the rate of 5 sq feet for each sheep. However only 48.86% flock men provide shelter in the form of *wada* with roof and remaining do not make satisfactory provision of the sheep shelter. So it affects negatively on productivity.

#### **Vaccination & Treatment on Sick Sheep:**

Most of the sheep rearers are giving self treatment to ill sheep. They also give injections and doses to the sheep without any training and technical knowledge. Tablets and liquid doses are sold without any prescriptions of the veterinarian. Pharmacists are taking disadvantage of their illiteracy. Government veterinarian doesn't visit on proper time. Some sheep farmers have given contracts to the private veterinarian. Out of the total 64% sheep owners are not related to govt. veterinary services like vaccination and treatment. Only 25% sheep farmers vaccinate their sheep as per schedule and remaining are found to be careless about vaccination.

#### **Sheep Insurance & Sheep Farmer's Insurance Scheme:**

Sheep and Goat Insurance Scheme is protective for sheep owners against contingency losses. There are instances of theft and attack of wild animals, mortality due to epidemic diseases but most of (94.69%) sheep flocks are not insured, so they

cannot claim any compensation. Sheep owners are unaware of sheep insurance. Very few sheep owners (11.64) have taken membership of sheep farmer's insurance scheme. Most of them are illiterate and unaware about the scheme.

### **Mortality of sheep & Lamb:**

Lamb mortality should not be allowed to exceed 10% under ideal sheep management practices but most of sheep owners are facing the problem of high mortality of lamb. More than 15% mortality is seen in study area. Starvation of sheep and shortage of water in summer season are the causes of premature lambing and their death. Diarrhea, dysentery, chocks disease and pneumonia are the causes found for mortality of sheep lambs. There is wide spread mortality of the sheep. The diseases such as sheep pox, H.S., Blue tongue and Anthrax are found epidemic diseases. On an average 64.55% sheep owners suffer losses because their sheep die due to epidemic disease.

### **Sources of Capital Financing:**

Value of sheep flock depends upon the number of sheep and variety of sheep. Madgyal sheep flock requires more capital investment than that of Deccani sheep flock. It is seen that, majority (77.46%) sheep owners are not depend upon external finance and they meet their financial need independently because they are doing this occupation from generation to generation.

### **Trend of Grass Plantation in the Field:**

Crop production is closely integrated with livestock. It was observed that very few (37%) sheep farmers took leguminous feed such as cereals, maize, cowpea and Lucerne in their field. Shortage of water in summer season, non- irrigated land, insufficient land, not seen any model farm, and lack of awareness among them are the causes for non plantation of grass crop. Therefore, most of the sheep owners were facing the problem of grass within the summer season.

### **Passing From Generation to Generation in Traditional way:**

Dhangar community is leading in the sheep farming occupation in the study area. On the other

hand other communities are also engaged in this occupation. Most of sheep farmers about 64.65% are engaged in this occupation from generation to generation and rest are doing it since 10 to 20 years ago. The percentage of passing it from generation to generation was found highest in drought prone area than that of irrigated area. It is found that most of the farmers are doing sheep rearing occupation in traditional approach.

### **Suggestions:**

#### **1) Training**

It is realized that there are training courses such as poultry, dairy fishery and goat farming but there is no provision of training for sheep farming. Therefore training courses of short duration are needed assisted with stipend. It is necessary to make an arrangement by Govt. and NGO's on the themes like Sheep rearing Management, vaccination and treatment on sheep, Management of twin lambing, record keeping of sheep rearing occupation etc.

#### **2) Veterinary services**

Animal husbandry department generally concentrates on cow and buffaloes but neglects the sheep rearing occupation. But considering its importance, it is needed to give justice by making separate provision in budget and separate veterinary department for sheep and goat for development of sheep rearing occupation. It is realized that there is high mortality among sheep and lambs due to illness, epidemic disease. To minimize this mortality free vaccination policy should be implemented compulsory.

Taking into consideration the hurdles in migratory nature of sheep rearing, it is necessary to provide Mobile veterinary service van within the migration period

#### **3) Establishment of Cluster Groups for Services**

Sheep and Goat Development Corporation, Pune (Maharashtra) and NARI, Phaltan Dist Satara should take initiative and guide them to improve their professional approach. And also it is essential to promote and motivate the setting up N.G.O's

for linking business. These N.G.O's will help to solve their problems like proper treatment, vaccination and insurance of sheep flock. This type of service will increase self confidence of sheep farmers as it is a part of social support. There is a need to formulate talukawise Sheep breeder's organizations for clustered linking services. Sheep farmer's insurance scheme should be implemented with due care.

#### **4) Compensation and Insurance Awareness Program**

Sheep farmers were suffering lot of loss due to death of sheep from epidemic diseases but they could not get any compensation of their loss. Therefore, it is suggested that government should compensate against contingency losses of sheep farmers. Considering high mortality rate of sheep and lamb, it is an urgent need for conducting insurance awareness and training program for sheep and goat farmers by General Insurance Companies.

#### **5) Water, Fodder and Forest policy**

Considering the shortage of water in drought prone area, it is essential to build open tanks for each village for animal's water and these tanks should be filled through the government water supply tankers. In famine period, the government has provided fodder depot for bovine animal but not for sheep and goat. Government should provide fodder depot in summer and famine period for sheep and goat to avoid their migration.

Non availability of feed and fodder was considered as one of the most serious problems. In order to solve this problem, the development of grazing land and cultivation of fodder crops through wasteland development program may be initiated and also is essential to increase awareness for cultivation of fodder crops in their farms.

#### **6) Wool processing unit and research center**

Wool market is in the hands of private brokers and private woolen yarns holders. Wool does not get fair price. Education regarding assisting bodies viz. Khadi Gramodyog Commission, cooperative wool factories is pivotal to get fair prices for

wools. Therefore, there is an urgent need for establishment of modern wool processing unit on co-operative basis and this will help to minimize the intensity of the problem.

The wool of Deccani and Madgyal sheep is rough and coarse, so genetic improvement for the purpose of fine wool is needed, it would help to increase demand and income of sheep farmers. For the purpose of overcoming this problem, Central Sheep and Wool Research Institute, Jodhpur should take this issue seriously.

#### **7) Marketing system**

Marketing transactions are not regulated properly. The sheep and goat are sold on unit basis irrespective of their weight. Therefore; it is beneficial to the farmers to sell the sheep and goats as per actual weight. The weighing machine should be provided by the marketing committee to the sheep rearers. For implementation of weight basis in marketing of sheep and goat, suitable legislation should be passed.

#### **8) Loan facility**

Considering economic need and urgency of sheep owners there should be short term loan facility on hypothecation of sheep flock. The efforts should be made by banks to provide loans at reasonable interest rate to the needy sheep farmers provided 50 to 60 sheep are essential from economic point of view for sheep rearing and semi intensive farming. Considering this, loan projection unit should be of 50 to 60 sheep. In addition, District Central Co-operative bank should design special short term loan scheme for sheep rearing occupation.

#### **Conclusion:**

It felt that if above mentioned suggestions will be implemented sincerely by concern authorities and NGO's, the productivity and profitability of sheep rearing occupation will definitely improve. There is an urgent need to create awareness among the sheep farmers about vaccination and sheep insurance. In addition there is necessity to create professional approach among sheep farmers in order to enhance total management of their

occupation. Sheep rearing occupation is the part and parcel of rural economy it generates self employment and provides employment opportunities to slaughter, skin and wool processing units. This occupation has definite future but there is need of time to run this vocation by applying proper management practices for its sustainable growth.

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# The Status of Confused Market and BT Brinjal in India, a Review

Mahdieh Gholampoor, R.M.Kharche, G.R.Pathade

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## Abstract :

Genetically Modified Foods offer a variety of potential environmental, social and economic benefits but, they are the centre of extreme public and political debate at present. Many medical, political, ethical and religious discussions arise over the production and consumption of these foods. Status of most of developed and western countries is almost clear about GM foods but most of developing countries including India have taken an indecisive position in front of the case of GM foods. In 2007, India's Supreme Court cleared Bt Brinjal for trials and on October 2009, the regulators of the Government of India have cleared Bt Brinjal, the first Genetically Modified (GM) food crop in the country for commercial cultivation. The Government of India was to decide on its commercial release after holding consultations with all stakeholders in January and February 2010. This decision of the Indian Government regarding BT brinjal has its opponents and proponents. In this study we have focused on the debates of both sides and come out with some suggestions for the decision makers which can help to solve the confusion of the market regarding GM foods and specially BT brinjal.

**Keywords:** BT Brinjal, GM Brinjal, India, Confused Market

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## Introduction:

Europe's rejection of GE food has cost the GE seed industry dearly, which is why they are strategically forcing open the Asian market. India has responded to this in a confused manner (Greenpeace, 2010). Context<sup>1</sup> senior associate, Mark Nelson said "Now that Bt cotton is approaching full adoption, India stands at an important crossroads as they consider prospects for other Bt crops, in-

cluding food crops" "In 2007, India's Supreme Court cleared Bt Brinjal for trials (Context, 2009), and on October 14th 2009, the regulators of the Government of India have cleared Bt Brinjal, the first Genetically Modified (GM) food crop in the country for commercial cultivation. The Government of India is to now decide on its commercial release after holding consultations with all stakeholders in January and February 2010 (Ramesh, 2010). India's Minister of Environment and Forests Jairam Ramesh, rejected the introduction of a Monsanto GM Eggplant from entering the Indian food market on 10<sup>th</sup> February 2010. There is a strong pipeline of biotech crops in India but *Bt* brinjal may become the first transgenic food crop to be introduced in India. Considering that agriculture is vital to India, there is substantial public sector investment in agri-biotech. Private sector investments, by comparison, are still comparatively low. National research emphasis has been on genomics of rice, chickpea, wheat and tomato, and on tolerance to biotic (diseases and pests) and abiotic (drought, salinity) stress. A number of public-funded R&D initiatives focus on the identifi-

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**Export Marketing System of Floriculture : Shrivardhan Biotech, Kondigre - A Case Study**

cation of quantitative trait loci and genes and their deployment into cultivars. *Bt* rice is under field-testing. Other priorities include enhancement of nutritional quality (beta carotene in rice and mustard, micronutrients such as iron and zinc in rice, wheat and maize, and protein quality in potato through *ama1* gene) and improvement of shelf life in fruits and vegetables, especially through delayed ripening (Tuli et al, 2009).

#### **About brinjal and its importance in India:**

The plant is native to India. (Doijode, 2001, Tsao, 2006) Brinjal or baingan, known as eggplant and aubergine is known as 'King of Vegetables'. We can find brinjal in the dishes of almost every household in India, regardless of food preferences, income levels and social status.

Low in calories and high in nutrition, the vegetable has very high water content and is a very good source of fiber, calcium, phosphorus, folate, and vitamins B and C. It is also used in *ayurvedic* medicine for curing diabetes, hypertension and obesity. Despite being king of vegetables It is often described as a poor man's vegetable because it is popular amongst small-scale farmers and low income consumers. (ISAAA, 2009, CEE, 2009)

#### **Why BT Brinjal? (Benefit Bt brinjal):**

The recently published book, Genetic Roulette by Smith (2007) has stated that presently produced 89% of soyabean, 75% canolla, 83% cotton and 69% of corn are GM crops. Available marketed GM crops are primarily chosen and used in the fields for exhibiting three traits. These are (i) Lepidoptera type of insect resistant Bt GM crops (ii) Weedicide tolerant GM crop 'Round up Ready?', and (iii) Golden Rice GM crop. Extensive research and commercial utilization of GMOs are mainly carried out by three multinationals, namely, Monsanto U.S.A, Syngenta of Switzerland and

Bayer Crop Science of Germany (Mathew, 2008). In case of brinjal farmers try to control the threat of Fruit shoot Borer (FSB) by application of insecticide and biological control means, but as FSB larvae are concealed within shoots and fruits, the pest normally escapes insecticide sprays. Therefore farmers tend to over-spray insecticides which causes additional cost of pesticides for farmers along with its negative effects on the environment and high pesticide residues in brinjal fruit which is a serious risk to consumers' health and safety. None of existing Brinjal varieties in India has adequate resistance to FSB. Because of that scientists have used biotech methods to develop a new variety of Brinjal which can resist in front of FSB. (Choudhary and Gaur, 2009, ISAAA, 2009)

#### **How the BT Brinjal is produced and regulated in India?**

Agricultural biotechnology, of which gene transfer technology is one of the most important tools has made tremendous progress to make it like a magic wand. Through this tool, particular trait or character as embedded in the specific gene could be transferred and implanted in the genome of targeted species and organisms (Bagchi, 2009).

*Bt* brinjal has been developed by Mahyco (a private company) and UAS, Dharwad/TNAU, Coimbatore (Public Sector academic institutions) with other collaborators as well. Scientists have introduced the *cry1Ac* gene to brinjal. The gene can express a protein which is insecticidal and makes the brinjal resistance against FSB. The *cry1Ac* gene is sourced from the soil bacterium *Bacillus thuringiensis* (Bt). When FSB larvae eat the GM plant the Bt protein is activated in the insect's alkaline gut and binds to the gut cavity. The FSB larvae die a few days later (Center for Sustainable Agriculture, 2006, Mahyco, 2006)

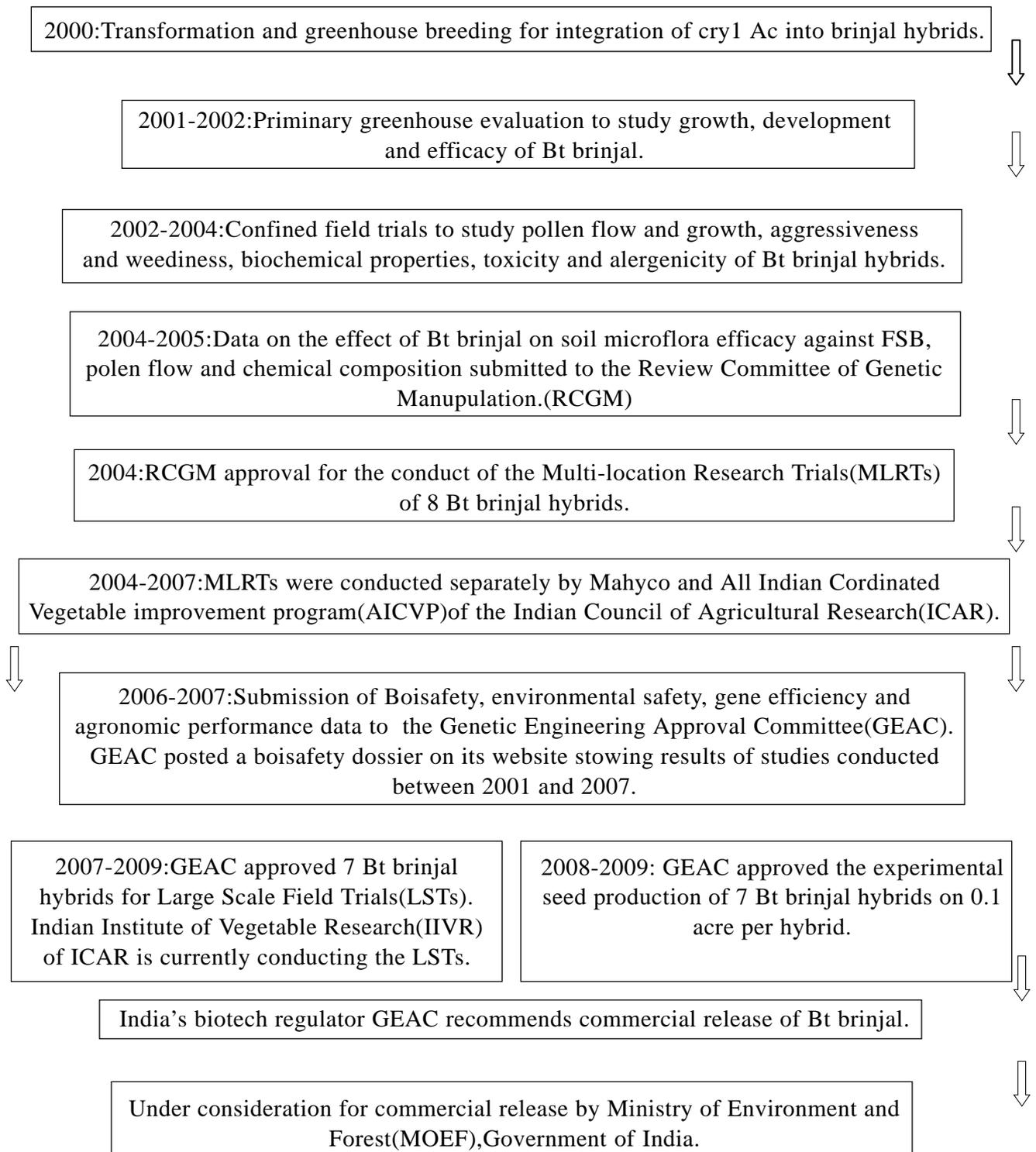


Figure 1. Development and Regulation of Bt Brinjal in India. (Adapted from Choudhary and Gaur, 2009, GEAC Dossier 2008, MOEF, 2009)

**Stake Holders of Bt Brinjal:**

Stakeholders (farmers, consumers, media practitioners, policy makers, scientists, academics,

religious leaders, industry sector representatives, students, and other partners) or the so-called attentive publics are critically involved in framing the debate, shaping policy, influencing public opinion, and creating greater awareness and understanding of crop biotechnology (Navarro,

2009). From different organizations representing scientists (including Supreme Court appointed expert Dr. Pushpa Bhargava in the Expert Committee), research organizations, NGOs, Farmers' organizations and number of state governments, protests were lodged in courts of law while questioning various methodologies adopted in conducting trials, collection of data and various other issues concerning ecology, bio-diversity, bio-safety, bioethics and international laws and protocol and after all the debates, the Genetic Engineering Approval Committee (GEAC) cleared *Bt* brinjal for commercialization on 14 October 2009. The activists are up in arms terming the approval as a shame. The government has chosen to go slow and states that it would consult the stakeholders before making a decision on the release. Besides, the stakeholders have taken hardened positions and would not relent. The arbiters would be the farmers. They would accept it if they can make profit, as has been the case with *Bt* cotton, clandestine or otherwise. (Padmanaban, 2009) On the other hand we should not forget about a large number of women labor being involved in manually removing weeds and with the use of biocontrol agents, they will become jobless. Every new technology has its opponents and supporters, this technology is not an exception too.

#### **What supporters say?**

Multinationals as also some of the premier organizations are strongly of the view that rigorous screening and evaluation of all possible aspects have been made and all these have clearly confirmed that GM i.e *Bt* brinjal is nutritionally at par with other varieties, safe to consume and there is no possibility of long term health hazard. Further, *Bt* will reduce insecticidal spray hazard and thus cost of cultivation will come down and benefit will accrue to the farmers. Several ICAR organizations after few trials have recommended cultivation of this GM crop. DST, and CSIR chief among others are in favor of introducing *Bt* brinjal while suggesting to monitor future results (The Hindu, 2009(1)). Other supporters of GM crops

say that Crop biotechnology is one of several agricultural strategies to address problems of food and energy, poverty, and environmental degradation. (Navarro, 2009)

There are lots of scientific articles about advantages of *Bt* brinjal which say;

- It is reported that the average shoot damage in *Bt* Brinjal hybrids ranged from 0.04% to 0.3% as compared to 0.12% to 2.5% in non-*Bt* Brinjal hybrids.
- The percentage of damaged fruits reportedly ranged from 2.5% to 20% in *Bt* Brinjal to 24% to 58% in non-*Bt* counterparts
- No significant difference was noted between *Bt* Brinjal and Non-*Bt* Brinjal, as per the company which did bio-safety tests like acute oral toxicity, sub-chronic oral toxicity in rats, allergenicity of protein to rats, germination, weediness and aggressiveness tests, soil microbiota studies etc.
- This will help small and marginal farmers from having to use 25-80 sprays of pesticides which are ineffective, says the company
- The company claims that human health concerns due to pesticide use can be addressed with this transgenic Brinjal with its in-built tolerance
- Company promises that through this in-built tolerance, there would be substantial increase in marketable yields. Higher yields would result in higher incomes for farmers, it is expected
- The pricing of the seeds will be based on a cost-recovery model, making it affordable for all farmers, whether the seed comes from the private sector or the public sector, it is promised
- Farmers will be able to continue to save and re-use their seed for the hybrids and varieties because of this arrangement, it is reported (Gayen, 2009, Meherunnahar and Paul, 2009, Kumar, 2009, Chandra, 2010, DNA, 2009, The Hindu, 2009(2))

To put in words of Mark Nelson, Context Consultant, “The rapid pace of Bt cotton adoption shows an impressive capacity among Indian growers to recognize how new traits help them farm better.” (Context, 2009)

### **What opponents say?**

- **Antibiotic resistance:**

Two Antibiotic resistant markers are part of the gene package that is inserted in the GM brinjal one for neomycin resistance and one for streptomycin resistance. This raises serious issues of infectious microbes becoming resistant to antibiotics that are used in the treatment of human ailments (Greenpeace, 2010).

- **Toxicity of proteins released by the bacterial genes:**

Crystal [Cry] proteins used in this GM Brinjal have time and again been proved to be dangerous to human health. Crystal proteins are found to elicit immune responses when injected or ingested (Padrón-Vázquez et al., 1999)

- **Current safety testing does not include testing for allergic reactions:**

The company evades a discussion of the potential toxicity of the Bt brinjal by saying that the proteins, alkaloids, carbohydrates etc in GM brinjal are no different from non-GM brinjal. This testing principle called substantial equivalence is fundamentally flawed. Substantial equivalence means that molecules are chemically similar. It does not examine the structural variances in proteins, which causes serious rejections and allergies (Greenpeace, 2010, GM Watch, 2010).

- **No long term safety testing conducted:**

All clinical tests to assess the health impacts of Bt brinjal have been short term ones, just like drug trials. But brinjal is a food crop, and therefore is regularly eaten, unlike drugs. Therefore the fact that the long-term implications of GM brinjal have not been assessed is a cause for grave concern (Greenpeace, 2010, GM Watch, 2010).

- **Babies are at a higher risk:**

Infants are always considered as a high-risk group and the effects of such novel food items like Bt

brinjal needs to be checked for their effects on infants. No such study was done in the case of Bt brinjal. The Royal Society of London has in the past expressed concern in this regard (Royal Society, 2002).

- **Ecological Imbalance:**

Bt brinjal, like any other GE crop, may impact ecological systems by the creation of invasive species, the loss of diversity, or through toxic effects on non-target species. Toxins from *Bacillus thuringiensis* (Bt) have shown to kill butterflies, moths, and beetles and suffer negative effects, as in the case of the Monarch butterfly in the United States. (Losey et al., 1999)

- **Loss of consumer choice:**

The advent of GM Brinjal will also be the end of consumer choice in the country as the

consumers will never be able to recognize GM Brinjal from a Non- GM Brinjal in the market (Greenpeace, 2010).

- **Farmer’s seed sovereignty under threat:**

India is the center of diversity for brinjal and farmers from last 4000 years have developed hundreds of varieties that they used, saved, and exchanged according to their choice and the need of the hour. Bt brinjal like any other GM crop comes with a list of Dos and Don’ts specified by the patent regime. On one side with their aggressive marketing techniques, multi national seed giants and their subsidiaries will lure the farmers into their seed trap, and on the other the farmer will be denied the system of saving and exchanging as this goes against the profit motives of the company. All this will finally lead the Indian farmer to depend on multinational seed companies for the most important input in agriculture – the seed. (Greenpeace, 2010)

- **Irreversible genetic contamination:**

Brinjal is a highly cross-pollinated crop (Mahyco, 2006). This is something that even biotech companies agree to. This will lead to contamination of all the non GM Brinjal crops cultivated nearby and will thus eliminate the

# Problems and Prospects of Textile Industry in Solapur

Mainuddin S. Shaikh, Shivaji N. Borhade, Veer D. Ghorpade

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## Abstract :

Present study focuses to study the problems and prospects of textile industry in Solapur district. This paper highlights the impact of globalization on textile industry. In spite of having a better market for textile production not only in Maharashtra but also in other states and abroad, the Solapur textile industry is not progressing because it is not able to produce quality textile product with competitive price.

It was found that the textile industry in Solapur is facing problems like labour, finance, lack of technology upgradation, quality and cost competitiveness, weak structure, power and water problems, yarn price fluctuation etc. The textile industry would lose its current market share to the competitors, if it fails to modernize its textile industry and prepare for flexible, fast large manufacturing in this segment. The unit owners must develop their ability and will power to accept the new challenges of globalization.

**Keywords:** Textile, Industry, Solapur, Globalization, Prospects.

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## Introduction:

Solapur is well-known for manufacturing 100% cotton terry towels and *chaddars*. Solapur is mainly a textile oriented city and some well known textile units (Spinning and Weaving units) like Laxmi Vishnu, Narsing Girji, Solapur Sahakari Soot Girni, Yeshwant Spinning Mill etc. were working till 1995-2000. Solapur is known for its textile product; hence the number of handloom and powerloom units is more in Solapur. Even, Solapur was known for the composite mills right from cotton into yarn and yarn into cloth.

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In spite of having a better market for textile production not only in Maharashtra but also in other states and abroad, the Solapur textile industry is not progressing because of several problems. This paper will try to focus on the problems and prospects of textile industry in India, particularly in Solapur. For identifying the problems faced by textile industry and their solutions and making economic growth of the Solapur, the outcome of this paper may be fruitful.

## Review of Literature:

Mrunaliny Dev discussed the present position of textile industry in her book titled "Indian Textile Industry – Present Scenario". Dev throws a light on the challenges and adversities facing by textile industry in India. Author further stated that still India lags behind in productivity due to outdated technology. Shortage of skilled labour is also a great obstacle in the adoption of new technology in textile industry. V.S.R. Swaminathan, discussed the need of modernization of textile industry in his book titled "Global Textile Industry", published in 1999. He is of the opinion that there is a need to modernize and strengthen the existing

powerloom service centres by installing shuttle less looms, shuttle changing looms etc. Srikrishna Mahajan in his article “Decentralized Powerloom Industry in Ichalkaranj” published in Southern Economist in 2006 has discussed about the challenges and opportunities of powerloom industry in India. According to him, the challenges before powerloom industry are to become self-reliant for cotton textile production, technology upgradation for the production process, global competitiveness, quality control, reduction of cost, availability of skilled workers, problem of power cut etc. He opined that for boosting up Indian powerloom industry, the government should fix up weaving charges and minimum price of cotton yarn and cloth should be declared periodically. N.K. Mirchandani, has expressed his views about the government policies relating to textile industry in India through his article titled “Textile Industries of India – Challenges and Prospects”, published in Southern Economist” in July, 2004. He opined that the textile industry should be boosted and encouraged to enter into foreign ventures so as to compete globally. He further opined that the National Textile Policy has also formulated rules pertaining to certain specific sectors. P. Chellasamy and N. Sumathi also throw a light on the current states and history, in their book titled, ‘Indian Textile Industry’. They opined that textile constitutes the single largest industry in India. The segment of the industry during the year 2000-2001 has been positive. Manjiri Kamat has taken an overview of Indian textile industry in her article titled ‘Overview of Indian Textile Industry and Export Performance’. She stated that textile industry plays significant role by contribution of 4 per cent of GDP and 20 per cent to the Indian exports kitty. She opined that Indian textile industry is completely self reliant in the entire value chain from cotton crop to garment making.

**Statement of the Problem:**

The textile industry is facing number of problems in the areas of production, finance, skilled labour, lack of latest machinery, faulty marketing system, price fluctuation in raw material etc. Apart from these, it is also observed that:

1. Textile industrialists in Solapur are lagging behind in capital investment
2. There is under utilization of capacity, in machinery, manpower etc.
3. There is a shortage of skilled labour.
4. There is a marketing problem.
5. Use of outdated looms.
6. Load shading in Maharashtra, particularly in Solapur has affected very badly and caused a great set back.

The authors thought over the facts and decided to conduct the study on the topic entitled “Problems and Prospects of Textile Industry in Solapur”.

**Significance of the Study:**

Globalization is one of the major worldwide events that have taken place in the recent centuries in the history of world. It has caused far reaching impact on economic, political, social, cultural and the like. Due to globalization, the national barriers on nation to nation movements of goods, capital, personnel and technology are now being lifted. The doors of national economies are being thrown open to others. There are now free movements of capital, goods, personnel, technology etc. across the world. And due to this, the firms have to plan their production on a world-wide basis, supported by developments in transport and communications.

The impact of globalization is strongly felt in all sectors and types of business in our country. Many have benefited and some have become victims of it, one such victim is the entrepreneur of textile sector. The textile industry in developing countries like India exemplifies many of the opportunities and the threats from globalization. Now, it has to adjust to increased international competition. The growth of textile and garments exports from well established producers such as China, UK etc. has put the Indian textile industry under severe pressure due to obsolete technology, non-availability of working capital and lack of innovation etc.

With globalization, many changes are taking place in the textile industry. There is pressure on tex-

tile industry to produce quality product with minimum cost to enable them to compete in the competitive market.

In case of Solapur textile industry, there is a need to become cost effective and efficient. There is also need to improve technology both in manufacturing and services. In spite of having a better market for textile production not only in Maharashtra but also in other states and abroad, the Solapur textile industry is not progressing because it is not able to produce quality textile product with competitive price.

### **Objectives of the Study:**

The main objective of the study is to focus on the problems and prospects of textile industry and the particular objectives of the study are:

1. To review and understand the history of textile industry
2. To study the problems and prospects of textile industry in Solapur and suggest the remedial measures on it.

### **Research Methodology:**

This research is related to the study of textile industry in Solapur. The subject selected for research purpose can be considered as social research.

### **Sampling:**

The study is confined to Solapur District. There are about 500 textile industries. For the purpose of this study, 100 powerloom industries of Solapur were selected. The stratified sampling method was used for the study.

### **Methods of Data Collection:**

The data was collected through primary and secondary sources. Primary data was collected through the structured questionnaire, designed for the purpose and the secondary data was collected through the books, journals, government magazines bulletins etc. The data collected was duly processed with the help of current techniques of use of computer. The tables were prepared with the help of data on computer, which were further

analyzed and interpreted with the help of charts, graphs and statistical figures. The recommendations and suggestions based on the research were recorded along with findings and conclusions.

### **Analysis and Interpretation of Data:**

#### **Indian Textile Industry:**

India has been well known for the textile goods since very ancient times. The modern textile industry took birth in India in the 1818 at Fort Gloster near Calcutta. The cotton textile industry however made its real beginning in Bombay in 1850s. The first cotton textile mill of Bombay was established in 1854 by a Parsi Cotton Merchant then engaged in overseas and internal trade. The first cotton mill in Ahmedabad, which was eventually to emerge as a rival centre to Bombay was established in 1861.

The partition of the country at the time of independence affected the cotton textile industry also. The Indian union got 409 out of the 423 textiles mills of the undivided India. 14 mills and 22 per cent of the land under cotton cultivation went to Pakistan. Some mills were closed down for some time. For a number of years since independence, Indian mills had to import cotton from Pakistan and other countries.

After independence, the cotton textile industry made rapid strides under the Plans. Between 1951 and 1982 the total number of spindles doubled from 11 million to 22 million. It increased further to well over 26 million by 1989-90.

The cotton plant has always thrived in the wild. By contrast, the historical origin of its commercial exploitation, particularly with regard to textile uses, is fuzzier. Relevant literary references point to two distinct geographical origins of cultivated cotton, namely, Asia and pre-Columbian America. The first cotton fabric would date back to approximately as early as 3200 BC, as revealed by fragments of cloth found at the Mohenjo-Daro archaeological site on the banks of the River Indus. From India, cotton textiles probably passed to

Mesopotamia, where the trade started around 600 years BC.

There is evidence to suggest that trade in cotton started around Rome at the time of Alexander the Great, in the 4<sup>th</sup> century BC. The trade flourished after the discovery of the maritime route passing by the Cape of Good Hope and the establishment of trading posts in India. Portuguese trading prominence in this part of the world had been challenged by other European countries (notably, France and England) since 1698. The Arab conquests introduced the first cotton

manufacturing facilities into Spain (Granada), Venice, and Milan. In England, the first cotton-spinning factory opened its doors in Manchester in 1641. This date marked the beginning of the cotton industry in Europe.

The industrial revolution of eighteenth century Europe paved the way for the most far-reaching, influential transformation of cotton textile manufacturing. In this connection, the major technological innovations were given in the following Table No. 1.

**Table 1: Technology Innovations**

Sr.	Techniques	Year	Inventions
1	Kay	1733	First flying shuttle.
2	Hargreaves	1764	First spinning wheel operating several spindles (spinning-jenny).
3	Arkwright	1767	Water-powered machine to draw out and turn the cotton thread (water-frame).
4	Whitney	1793	Invention of the cotton gin.
5	Jacquard	1805	Automatic weaving loom endowed with a chain of cards with holes punched in. The loom could weave several patterns.

Source: (*Business World, Vol. 3 (1992)*)

The Table No. 1 reveals that how the technological inventions took place in the field of textile. The first flying shuttle was invented in the year 1733; first spinning wheel operating several spindles was invented in 1764. In the year 1767 the Water power machine was invented to draw out and turn the cotton thread. The Jacquard was invented in the year 1805 for weaving loom endowed with a chain of cards with holes punched in.

The cotton textile industry made rapid progress in the second half of the 19<sup>th</sup> century and by the end of the century there were 178 cotton textile industries. The number of mills increased from 178 with 4.05 lakh looms in 1901 to 249 mills with 13.35 lakh looms in 1921 and further to 396

mills with over 20 lakh looms in 1941. By 1945, there were 417 mills employing 5.10 lakh workers. After independence, the cotton textile industry made rapid strides under the plans. Between 1951 and 1982, the total number of spindles doubled from 11 million to 22 million. It increased further to well over 26 million by 1989-90.

The textile industry occupies a unique place in India. One of the earliest to come into existence in India, it accounts for 14% of the total industrial production contributes to more than 17% of the total exports and it is the second largest employment generator after agriculture. This industry has the potential of generating a large number of employment opportunities. About 35

million people are already engaged with this sector. That is why the Indian textile industry occupies a very important place in the economy of India.

The textile industry is providing one of the most basic needs of people and holds importance, maintaining sustained growth for improving quality of life. It has a unique position, as a self-reliant industry from the production of raw

materials to the delivery of finished products with substantial value addition at each stage of processing, it is a major contribution to the country's economy.

The following table shows the constant growth of decentralized powerloom sector during the years 1989 to 2004.

**Table 2: Growth of decentralized powerloom industry in India**

Sr.	Year	No. of power looms	Number of Units
1	1995-1996	14.12	N.A.
2	1996-1997	15.23	N.A.
3	1997-1998	15.58	N.A.
4	1999-2000	16.30	3.67
5	2000-2001	16.62	3.74
6	2001-2002	16.66	3.75
7	2002-2003	16.93	3.80
8	2003-2004	18.37	4.13

Source: (Ministry of Textile, Government of India, website: [www.goindirectory.com](http://www.goindirectory.com), [www.pdexcil.org](http://www.pdexcil.org) and [www.indiainfoline.com](http://www.indiainfoline.com))

The constant growth of the decentralized powerloom sector has been due to certain advantages, which it has enjoyed, viz. low overheads, low working capital etc.

#### **Textile Industry in Maharashtra:**

Maharashtra state is a leading producer of cotton and accounts for 20% of the country's total production. The area under cotton cultivation is around 29 to 31 lakh hectares, which is 30% of the country's total area under cotton production. 30 lakh families who are spread over in 22000 villages in the economically backward regions of Vidarbha and Marathwada of Maharashtra depend upon cotton cultivation. Most of these are small and marginal farmers.

Maharashtra contributes to about 10.4% to India's textile and apparels output. Cotton is available in bulk in Maharashtra, which is one of the key factors that have enables the state to establish a

competitive edge. Vidarbha region has a predominant cotton production, while western region is famous for spinning mills. The major clusters for the industry are Kolhapur, Mumbai, Nagpur, Nashik, Pune, Sangli, Satara, Solapur and Thane. The State has witnessed 122 major textile projects with an investment of USD 224 million. It is worth mentioning here that the Maharashtra has the largest 100% export oriented units, with a count of 560.

Major Textile hubs in Maharashtra are Bhiwandi, Malegaon, Mumbai, Amravati and Solapur. The total FDI investment in the textile sector till January, 2010 was USD 224 million.

Cotton is important cash crop in the State. During the 70's several malpractices like low rate, improper weightment, high deductions from the payment, high fluctuations in the rate paid by the speculative traders existed in the market, as result

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#### **Problems and Prospects of Textile Industry in Solapur**

of which cultivators were deprived of fair price for their produce.

To ensure fair and remunerative price to the Cotton Growers in the State, to eliminate the middleman in the cotton trade, to bring the stability in income of cotton growers and to supply scientifically grade quality cotton to the consumer mills, with these main objective the Govt. of Maharashtra enacted the Raw Cotton (Procurement, Processing and Marketing) Act, 1971. This act was implemented with effect from 1972-73 cotton seasons.

**Textile Industry in Solapur:**

Solapur is well known for manufacturing 100 per cent cotton terry towels and *Chaddars*. It lies on the Mumbai-Hyderabad National Highway around

440 kms from Mumbai. Solapur is mainly a textile oriented city and some well known textile units (spinning and weaving units) like Laxmi Vishnu Mills, Narsigh Girji Mills, Solapur Sahakari *Soot Girni*, Yeshwant Spinning Mills etc. were working till 1995-2000.

There are around 25,000 Jacquard Powerlooms, which manufacture terry towels and *chaddars*. Presently around 22,000 looms are in working condition. Around 80 per cent looms produce terry towels and the remaining are producing *chaddars*. Around 30,000 workers are employed in this industry. The following table shows about the size of the textile industrial units in Solapur.

Table 3: Size of the textile industrial units

Particulars	Size of the Textile Units			
	Small Scale	Medium Scale	Large Scale	Total
Number of units in Solapur	91	08	01	100
	(91%)	(8%)	(1%)	(100%)

From the above, it is observed that large scale units in Solapur are only 1 percent and 91 percent are small scale units, while 8 percent units are medium scale. It means that small scale units are very high in percentage in the city area, as well as, in various MIDC areas nearby Solapur city.

Around 25 per cent towels are exported from Solapur. There are very few manufacturers, who export their towels to European countries, East and Middle East countries, Australia, Canada, USA etc., directly under their own brand name. Many of the exporters extensively use e-marketing to promote their products in export markets, who have a strong presence in export market and capturing business through e-marketing.

As the climate of Solapur is suitable for the textile industries, some renowned textiles viz. Laxmi Vishnu, Jam Mills, Nursing Girji (Government mill), Solapur Soot Mill, Varad Mill were established in Solapur. But due to some financial,

marketing and labour problems, a few mills were closed down 5–10 years back, and the problem of unemployment was created for the people who were working in these industries. These mills were providing employment opportunities to the people in the Solapur district. Previously majority of the people from Solapur were working in these mills to look after their family. At present they are facing unemployment problem. But since two three years, some textile mills are coming forward and producing the textile products because they are getting good market within India and abroad.

Most of the powerloom industries are operational in day shift only from 8 a.m. to 6 p.m. with two hours break for lunch and recess. Some of the industries are operational in two shifts from 8.00 a.m. to 4.00.p.m. and from 4.p.m. till 12.00 midnight. The workers receive their payments on the ‘Piece Rate’ basis, based on category of the product. As the ‘Piece Rates’ of various products are different, there is variation in workers earnings.

Solapur represents a mini Ahmedabad in many ways. Solapur's economy is heavily dependent on the powerloom industry. Due to raw material deficit and marketing problems more than 40 per cent powerlooms either closed down or were in the red.

Despite a strong textile production base and historical background, the textile and apparel industry in Solapur is suffering from severe technological obsolescence and lack of economies of scale. Solapur today hardly reflects its past glory. The city which has cotton textile mills and other industries has lost its shine with closure of them. Over 50,000 workers have been thrown on roads to fend themselves. They have been eking their lives with petty jobs in competition with each other, very much like Ahmedabad. The government believed that if the textile industry has to sustain and improve its competitiveness and overall long term viability, access to timely and adequate capital should be made available at internationally competitive rates of interests.

Some of the bedsheet, *chaddar* and towel businesses are still alive but far away from its past glory. In recent years, they have been hit big time due to power and labour problem. They no longer are cost competitive and have almost disappeared in oblivion.

**Problems Faced by the Textile Industry:**

The textile industry is facing number of problems

**Table 4: Number of unit owners who are facing problems**

Particulars	Problem faced			
	Lack of working capital	High rate of interest rate	Repayment of installment	Less of profit margin on sales price
No. of textile unit owners	11 (11%)	13 (13%)	3 (3%)	91 (91%)

From the above table, it shows that 91 percent units are stated that they are not getting profit margin on sales price as per their expectations. About 11 percent units stated that they are facing the problem of lack of working capital and 13 percent

such as non-availability of sufficient funds, skilled labour, lack of latest machinery, price fluctuation in raw material etc. Apart from the above, the textile industry in Solapur is facing the following few problems.

**Technology Upgradation:**

The powerloom industry has been working with outdated looms. The textile industry of Solapur has 'islands of excellence', but the capability and performance of the average firm is not very high as compared to those in several other parts of country.

The technology stock and work practices in Solapur textile industry are outdated. The number of textile units having autolooms is very less because of lack of funds and skilled labours. Due to use of low cost and inferior machinery and equipment in production process, the productivity is less, which is resulted in high cost of production and less profit margin.

**Financial Problem:**

Textile industrialist is lagging behind in capital investment. The most of the textile industries are facing financial problem due to less profit margin, high rate of interest, low demand, global recession etc. The following table shows the number of unit owners who have facing the problems regarding financial matters.

units stated that they have burden of high rate of interest and nearly 3 percent owners stated that they are facing the problem of repayment of loan installment regularly due to low profit margin.

**Problems and Prospects of Textile Industry in Solapur**

India is the second largest textile economy in the world, after China, but gap between the two economies is huge. In order to reduce this gap and sustain the position of being the second largest textile economy, the government should attract Foreign Direct Investment in the textile sector.

**Quality and Cost Competitiveness:**

The textile industry in India, particularly in Solapur are not able to provide the quality of product with competitive cost as compared to other countries, because of lack of modernization, finance and skilled workers.

**Weakness in the Structure:**

There are distinct weaknesses in the entire structure of the industry, in processes like ginning and dyeing (and to some extent in weaving because of its inability to weave high value fabric), lack of product or process innovation, poor shop floor practices, poor use of modern management practices, inadequate plant and equipment maintenance etc.

**Availability of Skilled Labour:**

There is a shortage of skilled labour because due to closure of various textile mills like Laxmi Vishnu Mills, Narsigh Girji Mills, Solapur Sahakari Soot Girni, Yeshwant Spinning Mills etc., the skilled labours were shifted to nearby state like Karnataka and Andhra Pradesh. The labour turnover is high in the textile industry in Solapur. This is because of local, social, political problems, starvation, frequent recession in textile industry, inadequate wages etc. Labour absenteeism is very high in textile industry of Solapur, because of low wage rate, load shedding. Since spouses of labours are working in the Beedi industry and they are earning some more money, therefore, the textile workers are not bothered about their wages. Sometimes they help their spouses in making beedies and remain absent in the textile units. The following shows the number of units which are facing the problem regarding getting skilled labour.

**Table 5: Number of units facing problem of skilled labour**

Particulars	Textile units facing problem of skilled labour			
	Yes	No	Not responded	Total
No. of textile units	91	08	01	100
	(91%)	(8%)	(1%)	(100%)

From the above, it shows that nearly 91 percent units are facing the problem in getting skilled labour. Since the workers are not getting proper wages in the textile industry in Solapur, they have migrated to Andhra Pradesh. As owners of textile industry are least aware of the modernization of the textile units and benefits there-from, they are not taking interest in the modernization and because of the lack of modernization, they are unable to earn sufficient profit margin, which resulted in not disbursing good wages to the

workers. Only 8 percent units have stated that they are not facing such type of problem. Only 1 percent unit owners have not responded the question. It is revealed that getting skilled labour is very serious problem, which is facing by textile industries. This percentage is very high.

Problem which is concerned with the labour is very serious problem and major obstacles in the development of textile industry in Solapur. The following table throws a light on this matter.

**Table 6: Labour concerned problems**

Sr.	Particulars	No. of units	Percentage
1.	Heavy absenteeism	78	78
2.	Demand for higher wages	24	24
3.	Lack of specialized knowledge	16	16
4.	Bad labour relations	03	03
5.	Irresponsible and arrogant behavior	06	06
6.	Low productivity	36	36

The above table throws a light on the labour concerned problems. Seventy eight percent (78%) units have stated that they are facing the problem of labour absenteeism. Due to the high percentage of unskilled labour, there is low productivity. Nearly 35 percent units have stated that they are facing the problem of low productivity.

Some times labours are demanding for higher wages. For obtaining higher wages they work slowly, this fact has badly affected on the total productivity of the unit. Twenty five percent (25%) units have stated that they are facing the problem of demand for higher wages by labours. Sixteen percent (16%) units stated that there is no specialized knowledge to the labours and only 3 percent units have state that they have no good relationships with their labours. Some time, labours are behaving arrogantly and irresponsible towards work, nearly 6 percent units stated that they are facing such problem.

The reasons for heavy absenteeism of labour are low wages, illiteracy, load shedding and also since their spouses are working in the bidi industries and they are earning some money, therefore, the labours are not bothered about their wages and sometime they help their spouses in making the bidies.

#### **Problem of Power and Water Supply:**

The textile industry is suffering a lot for want of adequate and uninterrupted power and water supply. Frequent power-cuts and load shedding had affected the industry badly.

#### **Yarn Price Fluctuation:**

There is no any collective effort by textile unit owners for controlling the malpractices such as hoarding of yarn by some traders. Because of hoarding yarn, there is no any control over the price of yarn and that is why unit owners always facing the problem of price fluctuation.

#### **Conclusion:**

In spite of having a better market for textile production, not only in Maharashtra but also in other states and abroad, the Solapur textile industry is not progressing because, it is not able to produce quality textile product with competitive price. It is found from the study that textile industry in Solapur has been suffering from several problems. Out of 100 sample units, 63 (63%) units are facing financial problem, 79 (79%) units are facing skilled labour problem, 82 (82%) units are facing problem of price fluctuation in the raw material. 91 (91%) percent units have stated that they are not getting profit margin on sales price as per their expectations. Seventy eight percent 78 (78%) units are facing the problem of labour absenteeism. Due to the high percentage of unskilled labour, there is low productivity. Nearly 35 (35%) units have stated that they are facing the problem of low productivity. In addition, frequent power-cuts and load shedding, lack of product or process innovation, poor shop floor practices, poor use of modern management practices, inadequate plant and equipment maintenance have also posed some of the challenges before textile industry in Solapur.

The textile industry in Solapur has potential of earning more and more foreign exchange through export of textile products and attracting the foreign investment. It is interesting to know that 25% of the textile products of Solapur are being exported. It contributes to 17% of the total exports of India. It has also prospects of providing an employment opportunity to a large population of our country, as well as, making India self-reliant in one of the basic needs. About 35 million people are already engaged with this sector in India. In Solapur 30000 workers are working in this sector. If India would fails to modernize its textile industry, it will lose its current market share to the competitors, like China and South-East Asian countries. The textile industry has to become ready to accept the new challenges arise because of globalization and adopt the modernization in their production and services. By accepting these challenges, the textile industry will become one of the important sectors of Indian economy.

**Suggestions:**

1. There is a need to replace the obsolete looms with autolooms and modernization has become essential. As per the changing situation they have to make the technological changes. The modernization will increase the productivity, reduction of cost, improvement in the quality, increase in the volume of production etc. For the purpose of technological upgradation the textile modernization fund may be provided to the textile industries.
2. The textile industry would lose its current market share to the competitors, if it fails to modernize its textile industry and prepare for flexible, fast large manufacturing in this segment. The unit owners must develop their ability and will power to accept the new challenges of globalization.
3. In order to remain competitive in the international market and to withstand increasing competition in the domestic market, it is necessary to improve the quality of the product and to reduce the cost of production.

For this purpose, it is necessary to ensure the large investment in modernization and expansion. This will be possible only if the Technology Upgradation Fund Scheme (TUFS) continues in its present form.

4. The state government has so far played a moderate role in the development of the powerloom industry of Solapur. In its Textile Policy Statement, the state government has indicated that an integrated approach will be followed as regards to the development of powerloom sector henceforth. This responsibility of integrating the decentralized textile powerloom industry in Solapur is a welcome stand. This will conserve the traditional skill of the people.
5. Training department should be established to train the workers and to enhance skill required to increase the productivity. It is necessary to provide training to the workers through the special training programmes, Industrial Training Institutes. This will help to increase their mentality and also the efficiency in the work. It will results in increasing the productivity. Family welfare scheme be established in each textile units to support the workers.
6. There should be uninterrupted power and water supply and power-cuts and load shedding should be shifted to only on weekly holiday. On the other hand the power and water supply have to be made available with concessional rate.
7. There should be Yarn Pool Depot, which is a cooperative system to procure and supply yarn centrally to the participating units that will be more systematic and efficient. Such a yarn pool arrangement will aim at minimizing the present daily fluctuations in the prices of yarn that needed by this sector. A cooperative of all stakeholders should control and operate this Yarn Pool.
8. There is a need for improvement in yarn quality being produced by the large medium

scale powerloom units, as well as, the small spinning units. The small units producing lower count yarn should also follow quality norms and be capable of producing different blends, as well as, specialty yarns.

9. Every business depends on the availability of enough raw materials. There should be stability in the price of raw material, so that the textile unit owners can produce good quality of product in huge quantity.

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# Employment Generation by Sugar Co-Operatives in Rural Areas - A Case Study of Shri Datta Shetkari Sahakari Sakhar Karkhana Ltd., Shirol

Mansingh S. Dabade

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## Abstract :

Present study is an attempt to evaluate the role of co-operatives in generation of employment opportunities. Study found that after retirement of permanent employee's replacement is not done. Number of seasonal workers is reducing due to computerization and atomization of plant.

Women stake in sugar employment is only 2.66% and no women employee found engaged in seasonal employment.

Sugar factory is adopting reservation policy issued by government for employment. It has also found that due to sugar co-operative the self-employment has been generated in 37 different economic-activities in command area.

**Keywords:** Direct Employment, Self Employment, Sugar Co-operative, Datta Sugar.

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## Introduction:

Generation of employment opportunities is a major challenge in our country. Unemployment in India, both in terms of magnitude and severity, indeed poses a formidable challenge. Mobilization of resources, accelerated growth selective pattern of investment proper choice of techniques, opportunities, appropriate spectrum of economic activities in rural and urban areas with due consideration to the capital employment ratios and availability of complementary factors of production, suggest multi-programmed approach required to tackle the problem.

Most of the people in our country live in rural areas and will continue to do so for the unforeseeable future. In these areas, unemployment is often high and there is a need for Government to implement programmes to create work.

Co-operatives as an agency are not only to act as business ventures but also as centers of socio-

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economic change in rural Maharashtra. Co-operatives have certainly done commendable work in generation of employment opportunities in rural Maharashtra.

Success story of co-operative sugar factories not only in production of sugar and its by-products but in establishment of network of various types of co-operatives under its leadership and guidance. The attempt of study is to evaluate the role of co-operatives in generation of employment opportunities.

## Research Methodology:

Co-operatives as an agencies are not only to act as business ventures but also as centers of socio-economic change in rural Maharashtra. Co-operatives have certainly done commendable work in generation of employment opportunities in rural Maharashtra.

Success of co-operative sugar factories not only limited in production of sugar and its by-products but also in establishment of network of various types of co-operatives under its leadership and guidance.

The aim of present study is to critically study the contribution of co-operatives in Generation of

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Employment Opportunities in their command areas. Employment refers to both wage employment and self-employment.

Present research is undertaken with following objectives:

1. To study the direct as well as indirect employment generated by Shri. Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol.
2. To analyse the employment generation by using the variables like age, sex, education and to know the most benefited and the most neglected sections of the population.
3. To suggest measures to strengthen the employment generation system.

Study is natured as a case study of Shri. Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol. It covers all the commanding area of the Factory. The study takes into account direct as well as indirect employment generated by Factory.

As it is a Multi-state sugar co-operative, the commanding area is spread into two States (i.e. Maharashtra and Karnataka). It consists of 115 villages from four talukas like Shirol, Hatkanangale, Athani and Chikkodi. Shirol and Hatkanangale talukas are from Maharashtra State and Athani and Chikkodi talukas are from Karnataka State.

Study set to test hypotheses as, Shri Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol has generated both wage and self-employment and Besides agriculture, the employment is generated in allied areas.

The sampling techniques used to collect the data for the study are census, quota and purposive sampling.

There are thirty six departments in the sugar factory. All these departments are considered for collecting and analyzing the data. The data is collected for both permanent and seasonal employees working in these departments. A well structured questionnaire was prepared and administered by the researcher for this purpose.

The commanding area of Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol is spread over one hundred fifteen villages. The required data has been collected from one hundred five villages as the rest of villages (10) were not that important from the point of view of the research study.

The researcher has identified thirty-seven economic activities in which the employment generation is created due to Shri Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol. While developing the questionnaire proper care is taken to cover all the activities of employment. The questionnaire was circulated and the respondents were asked to record their responses in the written form. The respondents particularly less educated were asked the questions and the researcher himself recorded the responses in questionnaire. Quota sampling of non-probability type of sampling method was used to collect the data from permanent self-employed persons. Researcher has selected 200 samples out of 15200 employees. Researcher tries to touch each and every economic activity.

Along with permanent self-employed persons, there are a good number of seasonal self-employed persons working under the commanding area of the sugar factory. Same procedure as that of permanent self-employed persons was used to collect the required data. Researcher has selected 20 samples out of 70 self employed people.

Workers (skilled and unskilled) working at different level plays a vital role in the life of sugar factory. Sugarcane fertilizers provide constant supply of sugarcane to run the factory. The data was collected from the sugarcane cutters working for the factory. For this purpose, purposive sampling of non-probability type of sampling design was used. The gender aspect of the sugarcane cutters was considered while collecting the data. The questionnaire, as the research tool was circulated to twenty- five male and twenty five females.

Thus, the primary data was collected from employees inside the factory, permanent self-

employed persons, seasonal self-employed persons, sugarcane harvesters and analyzed for main study.

A well thought and systematic procedure was adopted to collect the required data from the sugar factory and concerned respondents. For respondents the different questionnaires were developed.

To collect the data, the researcher visited the different offices in the premises of sugar factory,

commanding area of the sugar factory and Government offices personally. Thus, the required data was collected with the help of valid questionnaires.

The collected data was exposed to different statistical techniques like percentage, mean, mode, minimum, maximum and standard deviation of different aspects of respondents to draw conclusions.

**Table 1: Total Employment Generated By Datta Sugar Factory.**

Sr. Areas	Male	Female	Sub Total	Total	%
A Direct Employment					
I. Permanent Employees	773	14	787	-	-
II. Seasonal Employees	715	00	715	1502	6.50
B Indirect Employment					
I. Permanent Employees					
a) In Factory Premises	111	54	165	165	0.71
b) In Commanding Area					
i. Shirol Taluka	3583	354	3937	--	--
ii. Athani Taluka	404	42	446	--	--
iii. Chikkodi Taluka	155	154	1709	--	--
iv. Hatkanangale Taluka	584	58	642	6734	29.10
c)Irrigation scheme	42	00	42	42	0.18
II. Seasonal Employees					
i. Sugarcane Cutters	5694	1187	6881	--	--
ii. Seasonal Self Employment	229	30	259	--	--
iii. Transportation	631	00	631	--	--
iv. Private Contract	206	06	212	7983	34.51
III. Employment generated in self employed units.	6070	637	6707	6707	29.00
<b>Total</b>	<b>20597</b>	<b>2536</b>	<b>23133</b>	<b>23133</b>	<b>100</b>

From the above analysis, it is clear that by sugar co-operatives employment has been generating by two ways i.e. direct employment and indirect employment or self-employment.

In direct employment the employment is generated by two ways-

- i) Permanent employment and
- ii) Seasonal employment.

Sugar co-operative provides permanent employment to 787 persons, out of that 773 were male and just 14 candidates (i.e. 1.78%) from female category. The reason behind is the physical nature of job. Only, 1.78% females were engaged in the job like hospital, sanitation etc.

In case of seasonal employment, Factory provides 715 seasonal employments in different departments like Production unit, Cane

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Development, General Administration etc. The important thing is that 100% seasonal employees were male candidates. The reason behind is that generally seasonal job is in a production unit and having physical in nature and in shift also and it is inconvenient for ladies. Therefore, women are not attracted towards seasonal job in sugar factory.

In case of indirect employment the employment is generated by three types -

- I) Permanent Employment.
- II) Seasonal Employment, and
- III) Employment Generated in Self-Employed Units.

#### **Permanent Employment:**

In case of permanent employment the employment has mainly generated in three ways-

- a) In Factory premises.
  - b) In Commanding areas.
  - c) Irrigation schemes.
- a) In Factory premises, one hundred sixty five people get an employment due to Factory. Out of these one hundred and eleven people are from male category and fifty-four from female category. In this sector, the percentage of female category is quite good.
- b) As Shri Datta Shetkari Sahakari Sakhar Factory Ltd, Shirol is a Multi-State Co-operative Sugar Factory; its commanding area is spread in four talukas of two States i.e. Maharashtra and Karnataka.

In these four talukas, total 6734 persons become self-employed due to Datta Factory. Out of which 6026 persons are from male category i.e.90.97% and rest of 9.03% (608) are from female category.

#### **c) Irrigation Schemes:**

Datta Factory had supplied financial assistance for completion of project of fourteen irrigation schemes. Now that scheme has handed over to respective village authority. For each scheme minimum three persons are required i.e. wireman, pump attendant, and patkari.

In irrigation scheme, 42 people get an employment. There is no single female candidate involved in this field because of the inconvenient nature of job.

#### **Seasonal Employment:**

Due to sugar factory seasonal employment has generated by four ways-

1. Sugarcane Cutters.
2. Seasonal Self-employment.
3. Transportation and
4. Private Contract etc.

#### **Sugarcane Cutters:**

This type of employment is seasonal in nature. The duration of employment is depends upon availability of sugarcane. Generally, on an average one hundred twenty days of employment has generated in this sector. 6881 people get an employment by way of sugarcane cutting. Out of which 5694 people are from male category and rest of 1187 are from female category.

#### **Seasonal Self-Employment:**

In the season of sugar factory some seasonal self-employment like garage, puncture shop, pan shop, restaurant, general stores has been generating around the sugar factory. The duration of this employment depends upon the duration of season.

In this area, 259 people get an employment, out of which 229 people come from male category and rest of 30 from female category.

#### **Transportation:**

In case of transportation business, 631 people get an employment and all the people are from male category. The reason behind this is that the heaviness and inconvenient nature of job. In this sector, employment has been generating in sugarcane transportation, sugar transportation, molasses transportation, bagass transportation, industrial alcohol transportation.

#### **Private Contract:**

In sugar factory, management gives some work to private contractor e.g. contract for goni printing, bagas lifting etc. In this area, two hundred twelve people get an employment.

Out of total employment, maximum employment (34.57%) has generated in the area of seasonal employment.

### Employment Generated In Self-Employed Units:

Self-employed units generated large numbers of employment. There are 6707 people get an employment through self-employed units. Out of

that, six thousand seventy people are come under male category and rest of 637 from female category.

Out of total employment, the share of this area was 29%. From the above analysis it is clear that due to sugar co-operative 23133 people get an employment opportunities i.e.(89.04% male and 10.96% females).

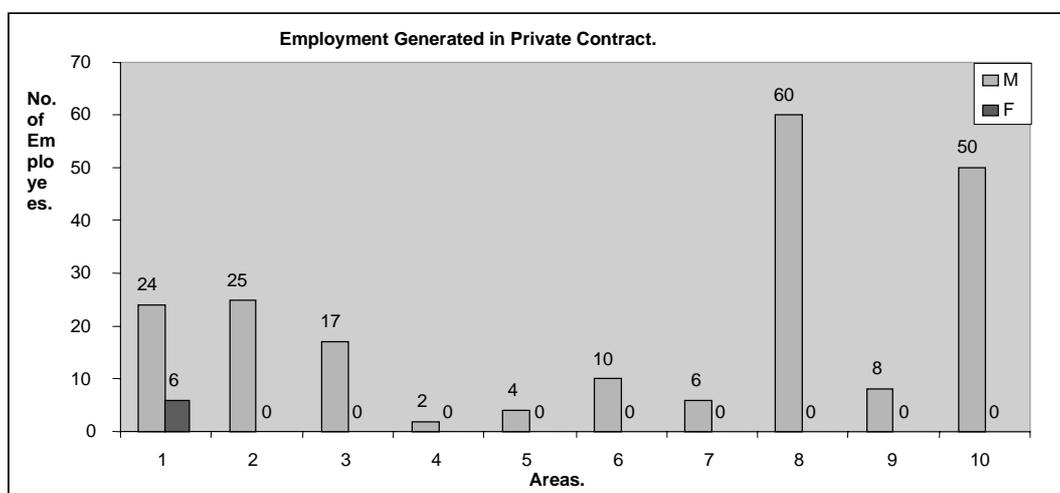
**Table 2: Employment Generated In Private Contract.**

The following table gives details about the employment generated in private contract.

Sr.	Contract	No. of Employees			%
		M	F	Total	
1.	Printing of gunny bags & Sulpher handling & cleaning	24	06	30	14.15
2.	Sugar house cleaning, house cleaning & other work.	25	00	25	11.79
3.	Bagas bailing work	17	00	17	8.02
4.	Low pressure boiler ash transport & Lime stone transport	02	00	02	0.94
5.	High pressure boiler ash transport.	04	00	04	1.89
6.	Lime bags unloading & Preparation of milk of lime	10	00	10	4.72
7.	Ele. Stitching of sugar bags.	06	00	06	2.83
8.	Spray of spent wash on compost.	60	00	60	28.30
9.	Truck, Tractor, Bullock-cart yard cleaning work	08	00	08	3.77
10.	Sugar delivery	50	00	50	23.58
	Total	206	06	212	100.0

Source: (Records of Shri Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol" (Maharashtra))

**Graph 1**



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**Areas:**

1. Printing of gunny bags and Sulpher handling and cleaning.
2. Sugar house cleaning house cleaning and other work.
3. Bagass bailing work.
4. Low pressure boiler ash transport.
5. High pressure boiler ash transport.
6. Lime bags unloading and preparation of milk of lime.
7. Ele. Stitching of sugar bags.
8. Spry of spent wash on compost.
9. Truck, Tractor, Bullock cart yard cleaning work.
10. Sugar delivery.

Above table and graph reveals the employment generated in private contract. Management gives the contract to private contractor in ten different

areas. From these areas, 222 persons get an employment (212 + 10 contractors). Factory gave the different types of contracts but only in one contract, the females were engaged i.e. in printing of gunny bags and Sulpher handling and cleaning. In rest of the contracts not a single female candidate was engaged in private contract, the reason behind this fact is the physical nature of job. Out of ten contracts, in four contracts the double-digit employment was generated. Out of them in spray of spent wash on compost and in sugar delivery the maximum (i.e.28.30% and 23.58% respectively) employment has been generated. In all other departments, the less number of employment has been generated. The employment generated through private contract is generally seasonal in nature.

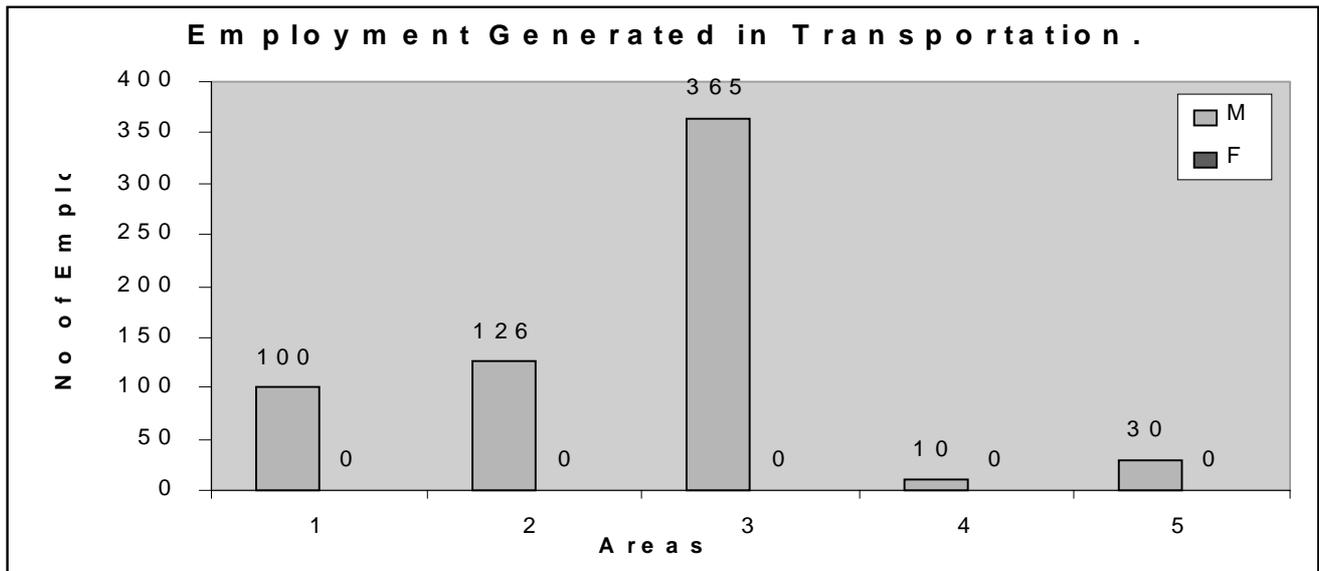
**Table 3: Employment Generated In Transportation.**

The following table gives the details about employment generated in transportation sector

Types of Transportation	No. of Employees.			Total	%
	M	F	Sub-Total		
Permanent Self-Employment					
A) Sugar Transport					
i) Trucks (50 trucks)	100	00	100	100	15.85
Seasonal Temporary Self-Employment					
B) Sugarcane Transportation					
i) Truck (63 trucks)	126	00	126		
ii) Tractor (365 tractors)	365	00	365	491	77.82
C) Bagas Transportation					
i) Trucks (5 trucks)	10	00	10	10	1.58
D) Molases + Compost					
i) Tractor (30 tractors)	30	00	30	30	4.75
<b>Total</b>	<b>631</b>	<b>00</b>	<b>631</b>	<b>631</b>	<b>100.0</b>

Source: (Records of Shri Datta Shetkari Sahakari Sakhar Factory Ltd., Shirol" (Maharashtra)

**Graph 2**



**Areas:**

1. Trucks (Sugar Transport.)
2. Trucks (Sugarcane Transport)
3. Tractors (Sugarcane Transport)
4. Trucks (Bagass Transport)
5. Tractors (Molasses+ Compost transport)

Above table and graph shows that the employment generated in transportation business. There are four areas of transportation in sugar factory, where the employment generated, these areas are-

- a) Sugar transportation,
- b) Sugarcane Transportation,
- c) Bagas Transportation and,
- d) Molasses and Compost Transportation etc.

In these four areas, total 631 people get an employment. Out of these, 84% people got seasonal temporary self-employment. Sixteen percent peoples get permanent self-employment in the areas of sugar transport because; sugar has transported through out the year. The job of transportation is continuously carried out throughout the year. The contractors for transportation are appointed by the management. However the one single contractor may not get the permanent employment as the contract is on management's discretion. Thus, transportation creates employment throughout the year, but the different persons.

In case of seasonal temporary self-employment the employment has generated in three types-

- i) Sugarcane transportation,
- ii) Bagas transportation and
- iii) Molasses and Compost transportation.

In sugarcane transportation, employment has generated by three ways i.e. through trucks, through tractors and through bullock carts. However, Bullock cart transporter is not included in above table because the person who drives the bullock cart is itself a sugarcane cutter and therefore, he is included as a sugarcane cutter.

For long distance, the truck are suitable for transportation and for that purpose for Datta sugar factory requires sixty three trucks and each truck requires two persons. Therefore, in this area one hundred twenty six people get an employment.

Tractors are used for medium distance, there were three hundred sixty five tractors are required for sugarcane transportation. For one tractor one person is required that means three hundred sixty five persons get an employment.

From the above table it is clear that not a single candidate is engaged in transportation business. The reason behind is that heaviness and in convenient nature of job.

**Table 4: Employment Generated In Allied Sectors in Factory Premises.**

The following table gives the details about the employment generated in allied sectors in factory premises.

Sr.	Units	No. of Units	No. of Employees		
			M	F	Total
1.	Consumer stores	01	30	19	49
2.	Canteen	03	37	04	41
3.	School	01	10	15	25
4.	Pat Sanstha	01	03	00	3
5.	Warana Veterinary Hospital	01	02	00	2
6.	Jewelers	01	01	00	1
7.	STD booth	01	01	00	1
8.	Tailor	02	04	00	4
9.	Photo studio	01	01	00	1
10.	Pan shop	02	02	00	2
11.	Zunka Bhakar Kendra	01	00	05	5
12.	Center of Sugar Sales	02	00	06	6
13.	Art Gallery	01	01	00	1
14.	Industrial Training Center	01	07	03	10
15.	Bank (KDCC & Udgaon urban)	02	12	02	14
<b>Total</b>		<b>21</b>	<b>111</b>	<b>54</b>	<b>165</b>

Source: (Field Data)

From the above table it is clear that employment is generated in allied sector in Factory premises. There are fifteen areas and twenty-one units in which the employment has been generated. Both types of employment (direct as well as indirect) have generated in the premises. In these areas, 165 persons get an employment, out of which 67.27% were male candidates and 32.73% were female candidates. Out of fifteen areas only in five areas double digit employment has generated. Interesting thing was that nearly 70% employment

generated in three areas and in all other areas, the rest of 30% employment has generated. The reason behind this is that the area like Jewelers, STD booth, Tailor, Photo Studio, Pan Shop, Art gallery etc, are a self-employed units and in small in volume. Even a single person can handle such activities. However, the areas like Consumer stores, Canteen, School, Industrial training centre, Bank etc, are big in volume. Therefore, it provides more employment opportunities, as a whole.

**Table 5: Taluka Wise Command Area of Sugar Factory**

Sr.	Name of Taluka	No. of Villages (Command Area)	No. of Respondents.
1	Shirol	53	106
2	Athani	07	14
3	Chikkodi	20	40
4	Hatkanangale	25	40
<b>Total</b>		<b>105</b>	<b>200</b>

Indirect employment generated is considered the inquiry in two ways. One is total and second is indirect employment generated by motivation and support of factory in the families of sugarcane producing farmers.

Another aim is to measure the magnitude of self-employment generated with the help of variables like age, sex, education, caste etc. The chapter also undertakes an analysis to find out the most benefited and most neglected section of the population.

The chapter deals with the self-employed persons with reference to following categories-

**Taluka wise Self-Employment Generated:**

As Datta Factory is a Multi State sugar factory. Its commanding area spreads in Maharashtra as well as in Karnataka State, in four talukas viz., Shirol, Athani, Chikkodi and Hatkanangale. In these Talukas the employment is generated due to Datta Factory. The employment is generated in thirty-seven different economic activities.

**Table 6: Taluka-wise Self-Employment Generated.**

Sr.	Name of Taluka	Shirol		Athani		Chikkodi		Hatkanangale		Total		%
		1	2	1	2	1	2	1	2	1	2	
<b>Areas of employment</b>												
1	General stores	845	693	149	84	513	337	454	91	1961	1205	61.45
2	Pan shop	519	197	65	4	264	28	274	2	1122	231	20.59
3	Bakery	63	26	8	0	28	5	68	1	167	32	19.16
4	Hotels	150	80	39	12	116	55	160	24	465	171	36.77
5	Tea stall	90	12	6	0	2	0	53	0	151	12	7.95
6	Cloth center	135	93	16	6	72	53	82	19	305	171	56.07
7	Ladies shoppy	16	14	8	2	7	3	28	3	59	22	37.29
8	Flour mill	269	232	32	15	134	100	188	29	623	376	60.35
9	STD booth	160	73	30	6	100	60	145	4	435	143	32.87
10	Medical	129	81	16	10	50	43	83	20	278	154	55.40
11	Steel center	57	33	11	7	50	31	54	15	172	86	50.00
12	Hardware	83	68	10	6	28	22	43	11	164	107	65.24
13	Carpenter	162	70	34	6	101	31	85	4	382	111	29.06
14	Mason	229	53	83	3	196	19	127	1	635	76	11.97
15	Black smith	59	17	9	0	33	6	30	1	131	24	18.32
16	Foot ware	66	23	11	2	43	3	54	0	174	28	16.09
17	Shoemaker	99	4	10	0	32	0	59	0	200	4	2.00
18	Potter	38	18	26	11	46	23	44	8	154	60	38.96
19	Gents saloon	273	66	52	4	178	21	301	2	804	93	11.57
20	Beauty parlor	25	3	5	0	19	3	34	1	83	7	8.43
21	Cycle repairs	145	25	26	3	85	12	75	0	331	40	12.08
22	Garage	94	67	17	5	46	22	71	16	228	110	48.25
23	Motor repairs	93	71	20	9	41	19	61	15	215	114	53.02
24	General repairs	30	15	12	3	10	5	29	0	81	23	28.40

**Employment Generation by Sugar Co-Operatives in Rural Areas - A Case Study of Shri Datta...**

Sr.	Name of Taluka	Shirol		Athani		Chikkodi		Hatkanangale		Total		%
Areas of employment												
		1	2	1	2	1	2	1	2	1	2	
25	Electrician	120	76	24	7	54	21	68	5	266	109	40.98
26	Decorators	52	25	10	3	25	12	34	8	121	48	39.67
27	Fabrication	53	35	11	4	40	12	69	19	173	70	40.46
28	Fertilizers	38	27	4	4	17	10	8	6	67	47	70.15
29	Photo studio	52	38	11	4	41	32	24	11	128	85	66.41
30	Paper agent	16	13	6	1	14	6	20	2	56	22	39.29
31	Xerox	28	14	7	1	29	12	24	6	88	33	37.50
32	Saw mill	30	13	11	6	25	12	9	0	75	31	41.33
33	Brick maker	64	47	4	2	17	11	5	3	90	63	70.00
34	Tractors	1410	1235	242	182	703	597	875	272	3230	2286	70.77
35	Trucks	259	124	26	8	56	21	168	26	509	179	35.17
36	Tailor	281	81	58	28	172	15	301	10	812	134	16.50
37	Private dairy	199	175	21	18	75	47	40	7	335	247	73.73
<b>Total</b>		<b>6431</b>	<b>3937</b>	<b>1130</b>	<b>466</b>	<b>3462</b>	<b>1709</b>	<b>4247</b>	<b>642</b>	<b>15270</b>	<b>6754</b>	<b>44.23</b>

Source: (Field Data)

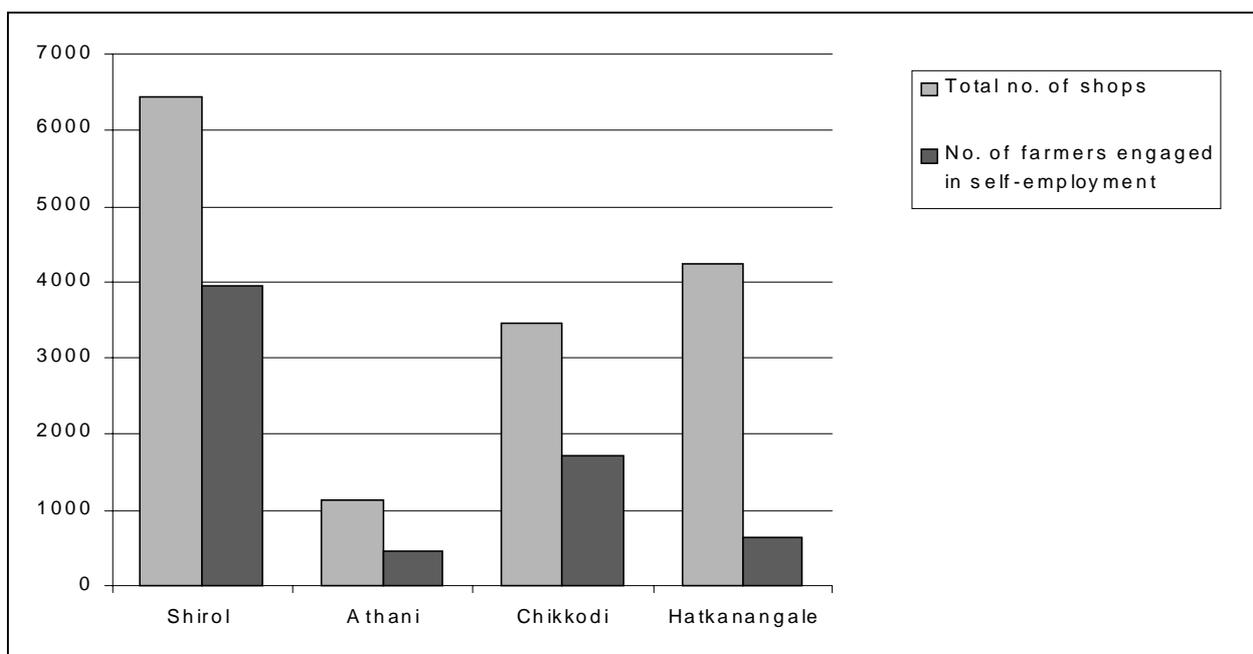
Note : 1) Figures in column 1 indicate total number of particular shops in the Taluka.\*

(\* commanding area of Shri Datta Factory ,Shirol.)

2) Figures in column 2 indicate number of farmers\*\* engaged in self-employment.

(\*\* who cultivate sugarcane crop and supply it to Shri Datta Factory, Shirol).

**Graph 3: Taluka wise Total Self-Employment Generated.**



Due to sugar co-operative, sugarcane growers are able to get additional income by proceeds of sugarcane, as compared to any other cash crop. Farmers can utilize this additional income in the self-employment.

The trend of using surplus or excess fund for self-employment is increasing among the farmers.

The above table and graph reveals the fact that due to sugar factory self-employment is generated in thirty-seven type of economic activities, as mentioned in the table. The maximum employment generated in Shirol Taluka (61.15%) then Chikkodi (49.36), Athani (41.24) and very less 15.11% in Hatkanangale Taluka. The reason behind this is that the Shri Datta Factory is situated in Shirol Taluka and maximum sugarcane growers from Shirol taluks supply their sugarcane to Datta Factory. Athani and Chikkodi Talukas are situated on the boarder of the Maharashtra and near to the Datta Factory and the maximum sugarcane growers supply their sugarcane to Datta Factory. However, in Hatkanangale Taluka the maximum sugarcane growers supply their sugarcane to Panchganga Factory as it is situated in that particular taluka and very less numbers of sugarcane growers supply sugarcane to Datta Factory. From the above table it is clear that there are twelve (12) economic activities where employment is generated more than 50%. 3491 persons are employed in Kirana/General Stores and Tractors i.e. it's share is 51.7% of total self-employment.

#### **Conclusions:**

##### **Direct Employment Generation:**

In sugar factory under study, the numbers of employees are reducing every year. As compared a year 2010 to the year 2005, employment is reduced by 16.46% including both permanent and seasonal employees. In case of permanent employment it is reduced by 15.37% and seasonal employment is reduced by 17.63%.

In last five years, only in seven departments employment is increased and in 28 departments

the employment is reduced. In case of permanent employees when they are retired, no fresh recruitment is done against the vacancy. In case of seasonal workers, the number is reducing due to computerization and atomization of plant.

In sugar factory there is a negligible number of female employees. In case of permanent employees only 2.66% candidates of the sample were from female category. There is not a single female candidate engaged in seasonal employment.

The sugar co-operative provides an employment opportunity to the people from all the categories and castes represented within the region by adopting reservation policy issued by Government.

Out of total sample (permanent employees and seasonal employees) 31% employees are from OBC & BC category.

##### **Indirect Employment Generation:**

Due to sugar factory under study, the employment has been generated in thirty seven different economic activities like General /Kirana stores, Pan shop, Bakery, Hotels etc. Out of these 37 economic activities there are 12 areas where out of employment generated in that particular economic activity, more than 50% of the employment is generated due to said factory.

Due to sugar factory under study in Shirol, Athani, Chikkodi and Hatkanangale taluka the self-employment has been generated in 53, 07, 20 and 25 villages respectively. The average self-employment generated in Shirol taluka is 61.5%, in Athani taluka it is 41.24%, in Chikkodi taluka it is 49.36% and in Hatkanangale taluka it is 15.11%.

##### **Suggestions:**

##### **I) Relating To Direct Employment Generation.**

- 1) As a principle of co-operatives, "the co-operative provide employment opportunities to the rural people". The sugar co-operatives may give work to the people by installing new units like Cattle feed, Cardboard, Bio-diesel etc.

- 2) Researcher suggests that there is a scope/opportunity for female candidates in sugar factory in the departments like General Administration, Accounts department, Hospital and Sanitation department etc.
- 3) There are eight castes out of fifteen, which acquires only 5.3% share in total employment in the factory. For equity in employment, the sugar co-operative may give an opportunity to the qualified and able candidates from these castes, which ultimately benefit them in to long run.

## **II) Suggestions Relating To Indirect Employment Generation.**

Sugar co-operative may provide a technological knowledge to young entrepreneurs in command area of the factory for those who are interested in establishing self-employment ventures or business. There are 13 economic activities like Pan shop, Bakery, Tea stall, Carpenter, Mason, Black smith, Footwear, Shoe maker, Gents saloon, Beauty parlor, Cycle repairs, General repairs, Tailor etc. where the employment has been generated less than 30%. In such economic activities, there is greater scope for human resource development and employment generation. Therefore, sugar co-operative may take initiative, promote self-employment in command area, and arrange training for such activities.

The ratio of female candidates is negligible in the area of self-employment. There is a very wide

scope for women in self-employment. For this purpose, the education level of female should be increased. Ladies oriented business like papad udhyog, chatni and masala udhyog, chocolate making, biscuit making, shewai making, ladies tailoring, dairy udhyog etc. may promoted in the region by sugar co-operative. For that, purpose sugar co-operative may provide training and development programme as well as financial support to the interested female candidates.

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# E-Banking and its impact on Customer Satisfaction : A Case Study of Public and Private Sector Banks in Satara City

Vijay M. Kumbhar

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## Abstract :

The ICT revolution has changed nature of banking services. Computerisation and its networking in banking institutes is the common application of ICT. It is known as e-banking services. It enables which to the any ware banking facilities. In this paper researcher has assessed impact of e-banking services on customers' satisfaction using service quality dimensions. For the assessment of customer satisfaction 'eBankQual' instrument has been developed according to specialty of the e-banking services and approach of the study. The result of the study shows that most of customers are satisfied in the e-banking services but not extremely satisfied. According to survey, customers of Axis bank, what do I mean by this, are more satisfied than other banks. There is insecurity, low efficiency, responsiveness and inappropriate problem solving process adversely affecting on customers satisfaction.

**Keywords:** Service Quality, E-Service Quality, Customer Satisfaction.

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## Introduction :

In recent years banking sector has been undergoing rapid changes, especially the implementation of Information and Communication Technology (ICT) has brought great changes in the banking services. In India the process computerisation of bank was started since 1985 in public sector banks. However, some private sector banks have started computerization before public sector banks in India. The banks in India are using Information Communication Technology (ICT) not only to improve their own internal processes but also to increase facilities and services to their customers. Recently 95 percent of public sector banks and 100 percent of private sector banks are computerized.

## Importance, Material and Method :

This study has been undertaken to assess the impact of e-banking services on customers' satisfaction because it is modern banking service in India and there is need to assess its impact on customer

satisfaction. The public and private sector banks in Satara City also investing much money in the computerisation bank but we should assess that, is it beneficial to the customers or not? There is need to identify the barriers and problems in satisfaction in e-banking services. For this reason, this research has been conducted to meet the objectives.

The required basic primary data has been collected by the customers' survey and secondary data has been furnished from websites of respected banks and the Reserve Bank of India as well as related secondary sources. There are total 60 samples (10 from each bank : SBI, Corporation Bank, Bank of Baroda, Axis bank, IDBI Bank, HDFC Bank in Satara City, Maharashtra State of India) are selected for the survey. The customer survey has been conducted by the structured questionnaire. The survey form has developed in two sections; first section is related to demographic information and second is related to the perception of e-banking services. To assess customers satisfaction new instrument (eBankQual Instrument) has been designed as per consideration specialty and different features of e-services than traditional ser-

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vices. At present numbers of methods and instruments are available to assess impact of service quality on customers' satisfaction. However, there is not any specific method to assess the impact of service quality of e-banking on customers' satisfaction. It has covered eight important attributes of the e-banking service quality i.e. System Availability, Service Fulfillment, Accuracy, Efficiency, Security, Responsiveness, Cost Effectiveness and Problem Handling. The customers' responses have been recorded by 'Five Point Likert Scale' 1 to 5. i.e. 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5= Strongly Agree. The survey has been conducted in different days and different times in the campus of State bank of India, Bank of Baroda, Corporation Bank, HDFC Bank, IDBI Bank and Axis Bank and only 02 customers of each bank were surveyed on five working days to reduce time bias. Collected data has been analyzed by SPSS 11.0 according to the objectives of the research.

#### **Review of Literature :**

In the marketing literature many researchers have been conducted to identify the customers' satisfaction in service industries like insurance, tourism, banking and other services. All research works evident that there is strong relationship between service quality and customer satisfaction. Work done by Parasuraman, Zeithaml and Berry (1985; 1988) provides the basis for the measurement of customer satisfaction with a service by using the gap between the customer's expectation of performance and their perceived experience of performance in their SERVQUAL instrument. Especially, in banking services Akiran (1994) has used BANKSERVE model to assess service quality of banking services with their six dimensions i.e. empathy, responsiveness, staff conduct,

access, communication and reliability. However, e-banking is different than traditional banking service, it is e-service. Hence there is need to assess this service with the considerations of quality aspects of e-service quality. There are some similarities and differences are between traditional service quality and e-service quality (Parasuraman et al, 2005).

E-Service quality measurement literature describes the impact on service quality assessment when technology (electronic technology) is introduced in service delivery. While Zeithaml, Parasuraman and Malhotra (2000) defined e-service quality as the extent to which a website facilitates efficient and effective shopping, purchase and delivery. Zeithaml et al (1993, 2002) has defined e-service quality dimensions - Quality of Information, Empathy, Reliability, Responsiveness, Access, Flexibility, Ease of navigation, Efficiency, Assurance, Security, Price knowledge, Site aesthetics and Customization.

In 2005 Parasuraman et al developed two different scales were derived for capturing e-service quality. The basic E-S-QUAL scale consists of 22 items on four dimensions: efficiency, fulfillment, system availability, and privacy, are used to assess the ease and speed of using website, the implementation of the site's promises, the correct technical functioning of the site, and the safety of the site and the protection of customer information, respectively. In the second scale E-RecS-QUAL containing 11 items in three dimensions: responsiveness, compensation, and contact, are employed when customer had non-routine encounters to measure the effectiveness of handling problems and return, compensation for problems, and availability of assistance, respectively.

## Instruments available for Assessment of E-Service Quality

Sr. No.	Instrument	Developed By	E-service Quality Dimensions
1	SERVQUAL	Parasuraman et al (1988)	Reliability, Responsiveness, Assurance, Empathy and Tangibles.
2	e-SQ	Zeithaml et al (2001)	Reliability, Responsiveness, Access, Flexibility, Ease of navigation, Efficiency, Assurance/trust, Security/privacy, Price knowledge, Site aesthetics and Customization /personalization
3	E-SQUAL	Zeithaml et al (2002)	Tangibility, Reliability, Responsiveness, Integration of Communication, Assurance, Quality of Information, Empathy
4	E-S-Qual & E-RecS-Qual	Parasuraman et al (2005)	Efficiency, Reliability, Fulfillment Privacy & Responsiveness, Compensation, Contact

### Conceptualization of Customer Satisfaction :

Customer satisfaction is the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service (Kevin Cacioppo, 1995). It is also feeling or attitude of a customer towards a product or service after it has been used. According to Oliver, (1980) satisfaction appears to mediate changes between pre-exposure and post-exposure attitudinal components. It is a major outcome of marketing activity whereby it serves as a link between the various stages of consumer buying behaviour (Jamal and Nasser, 2002). When customers pay money to buy a service, he has some minimum expectations from the transaction. These expectations from the purchase have to be met substantially, if not entirely for the customer to become a loyal customer of the service (Aneja 1993). These expectations are fulfilled of a promises- quality, fair price, availability, after sale services, complaints handling process, information, and variety etc. the customers are demanding high quality of services and low prices or charges. Better quality for the same cost is the motto of the customers. Sometimes they are prepared to overlook inconveniences also to avail better services at a low cost. Various empirical researches show that there is significant and positive relationship in service quality and customer satisfaction. Berry et al (1991) mentioned that there are ten 'Quality Values' which influence satisfaction behaviour i.e. Quality, Value, Timeliness, Efficiency, Ease of Access, Environment, Inter-

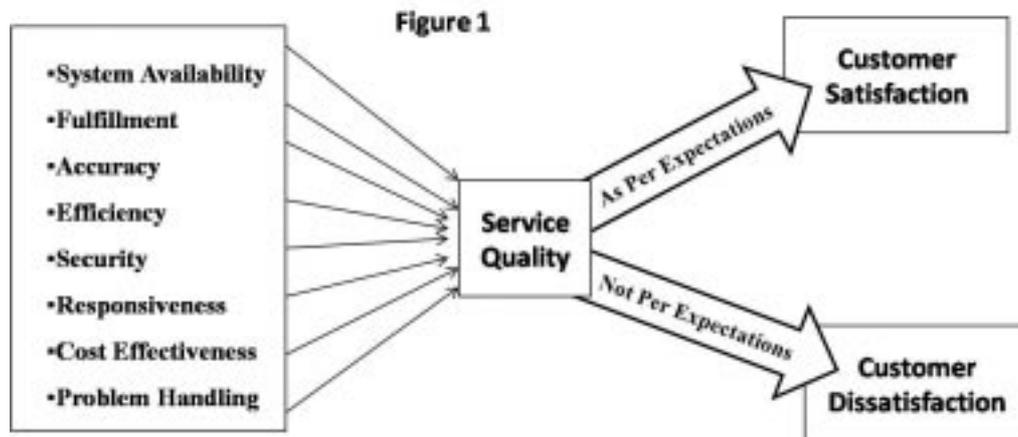
departmental Teamwork, Front line Service Behaviour, Commitment to the Customer and Innovation. Rueangthanakiet Pairot, (2008) defined Customer's satisfaction as the company's ability to fulfill the business, emotional, and psychological needs of its customers. However, customers have different levels of satisfaction as they have different attitudes and experiences as perceived from the company. There is followings are important determinants of customer satisfaction in e-banking services.

### 1. General Model of the Study :

For the assessment of e-service quality and its impact on customers' satisfaction in e-banking services, we have developed 'eBankQual' model. In this model we have considered very strong relationship between quality of service and customer satisfaction. The higher level of perceived service quality results in increased customer satisfaction. When perceived service quality is less than expected service quality customer will be dissatisfied (Jain and Gupta, 2004). Parasuraman, Zeithaml and Berry (1988) posited that if there is expected quality of service and actual perceived performance is equal or near about equal there is customers can be satisfy, while a negative discrepancy between perceptions and expectations a 'performance-gap' as they call it causes dissatisfaction, a positive discrepancy leads to consumer delight. According to Parasuraman, et al (1985, 1988) for the assessment of customers satisfaction expectation and perception must be measured.

However, Cronin and Taylor's (1992) experimental evidences indicate that the performance dimension alone predicts behavioural intentions and satisfaction about service quality. There is no need

of comparison of perception and expectation is good measure of service quality. Hence, we have adopted performance only scale to assess service quality of core banking services.



In this instrument eight dimensions of e-service quality has been used as below;

- System Availability- Up-to-date equipment and physical facilities - Full Branch computerization and networking
- Fulfillment- Scope of services offered, availability of global network, digitalization of business information, Variety of services
- Accuracy- Services without mistakes and accuracy in banking transaction
- Efficiency- Speed of service clearing, depositing, enquiry, getting information, and money transfer, response etc. immediate and quick transaction
- Security- Trust, privacy, believability, building customer confidence and freedom from danger
- Responsiveness- Problem handling, recovery of the problem, prompt service, timeliness service, helping nature, employee curtsey , recovery of PIN, password and money losses
- Cost Effectiveness- Cost effectiveness refers to saves money to visit branch and banking transactions
- Problem Handling- It refers to problem solving process regarding e-banking services

**Hypotheses :**

Reviewed literature indicates that the customer satisfaction depends on service quality and each

service quality dimensions is affecting on customer satisfaction. On the basis of literature the followings hypothesis has been developed to carry the present study:

- H1 = Service quality of e-banking services significantly affecting on customers satisfaction
- Ha = System availability of e-banking services significantly affecting on customers satisfaction
- Hb = Fulfillment of e-banking services significantly affecting on customers satisfaction
- Hc = Accuracy is significantly affecting on customers satisfaction in e-banking service
- Hd = Efficiency of e-banking service significantly affecting on customers satisfaction
- He = Security is significantly affecting on customers satisfaction in e-banking service
- Hf = Cost effectiveness of e-banking is significantly affecting on customers satisfaction
- Hg = Responsiveness of bank is significantly affecting on customers satisfaction in e-banking service
- Hh = Problem handling process of the bank is significantly affecting on customers satisfaction in e-banking service

### Customers Profile :

The customers' survey conducted in SBI, Bank of Baroda, Corporation Bank, Axis Bank, IDBI Bank and HDFC Banks in Satara city shows that 30 percent customers are in age below 25 and 30% of 25 to 35 years, 26.7% are in age of 36 to 50 years, and 13.3% are above 51 years (see table no. 1). The educational profile shows that 33.3% customers are SSC or below SSC, 45% customers are graduates (BA, B. Com, or B.Sc.) and 26% are post graduates or having professional degree (see table no. 1). The occupational structure of the surveyed customers shows that most of banking customers are either employees or professionals or employers i.e. Employees 36.7%, Professional 20.0%, Engineers, 10.0%, Businessman 13.3% and remaining are other types of customers. 36.7% customers having annual income Rs. 1 Lakhs or below, 20% having more than Rs. 1 to 3 Lakhs and 30% have Rs. 3 to 8 Lakhs (see table no. 1).

### Results and Discussion :

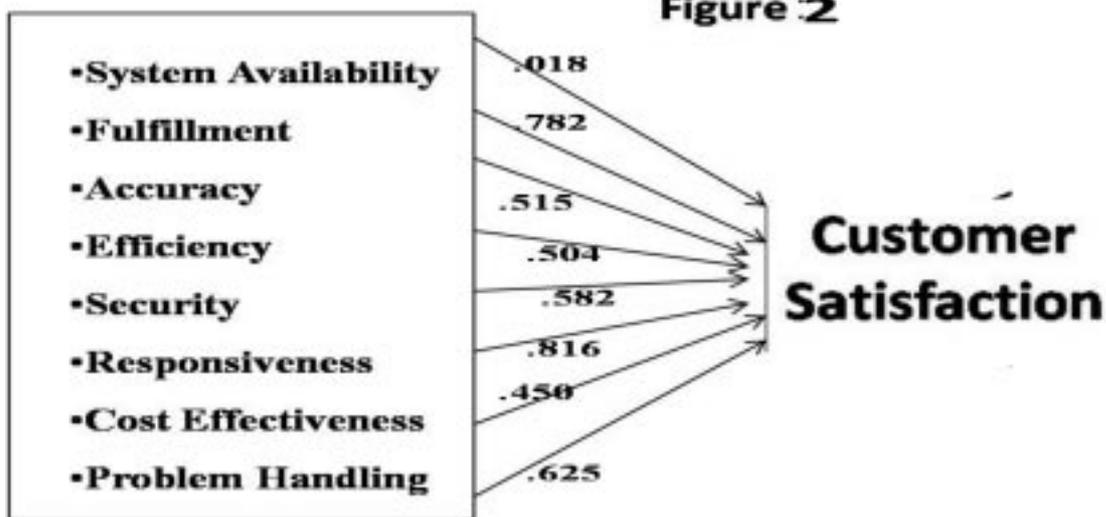
According to research conducted by various researchers in e-service quality system availability is important service quality attributes. To provide better e-services there is strong need to develop system as per to the requirements of customers.

1. System Availability and Overall Satisfaction (Ha) - Our survey shows that 36.7% customers satisfied and 56.6% are extremely satisfied with the system availability of e-banking services. Although, 6.7% customers are not satisfied with the system availability. However, correlation matrix shows that there is (.146) no significant relationship between system availability and overall customers satisfaction. It indicates that the banks are providing good physical facilities to the customers as per the customers' expectation.
2. Service Fulfillment and Overall Satisfaction (Hb) - 53.3% of customers agree with the service fulfillment of the e-banking services and 40% extremely agree with this. However, 6.7% of customers disagree with the service fulfillment, they want more services than existing. The correlation matrix shows that there is strong relationship between service fulfillment and customers' satisfaction at .782 levels. The customers are giving importance to the service fulfillment in their satisfaction.
3. Accuracy in Service and Overall Satisfaction (Hc) - There are 43.3% customers realized good accuracy in the e-banking while another 43.3% are realized very good accuracy in e-banking services. But 6.7% customers are disagree and 6.7% customers remain neutral about accuracy of e-banking services. The correlation matrix shows that there is significant correlation between accuracy of it and customers satisfaction at .515 level.
4. Service Efficiency and Overall Satisfaction (Hd) - Service perception of the customers shows that the efficiency of e-banking service is good because 43.3% customers extremely agree and 33.3% agree with the speed and efficiency of the e-banking services. While there is need to enhance speed and real time delivery of the services because 13.3% customers do not agree or disagree and 10% strongly disagree with the efficiency of the services. The correlation matrix shows that there is (.504) good relationship in the customer satisfaction and efficiency of the e-banking services. Hence, banks should develop efficiency of this service.
5. Security in the Service and Overall Satisfaction (He) - There is very strong need of security of financial transaction in e-banking services because there is no face to face contact of customers and banker. If bank provides assured services then the customers will feel free from danger in e-banking operations. The survey data shows that only 6.7% customers are any kind of fear about insecurity in e-banking services and 6.7% are confused about security, they do feel secure or insecure in using computerized banking. While 86.6% customers realized security in computerized banking. It is important dimension in the satisfaction because there is good relationship (.582) between satisfaction and security provided by banks in e-banking services.
6. Cost Effectiveness and Overall Satisfaction (Hf) - Cost effective is one of the important

attributes of the service satisfaction. The survey shows that e-banking is cost effective service, 50% customers agree and 43.3% customers strongly agree with the its cost effectiveness. While only 6.7% are confused about it whether it is cost effective or not. The correlation results show that there is somewhat (.450) relationship between cost effectiveness and customer relationship. While it is not much more important dimension in the customer satisfaction than other dimensions.

7. Responsiveness, Problem Handling and Overall Satisfaction (Hg and Hh) - Responsiveness and problem handling are also important dimensions of the service quality and customer

satisfaction in banking services. There are only 20% customers strongly agree with responsiveness and good problem solving process of the bank, 46.7% customers are just agree with this. 20% customers are not sure about responsiveness and good problem solving capacity and 13.4% customers do not agree with the responsiveness and good problem solving process of the bank regarding e-banking services. The correlation matrix shows that there is very strong relationship (.816) between responsiveness and (.625) between problem solving and customer satisfaction in computerized banking. Finally, it is indicates that overall service quality (H1) significantly effected on customers satisfaction.



The bank wise data shows that there is overall satisfaction of customers is higher in the Axis bank. The according to rank, IDBI Bank ranks 2nd, HDFC Bank 3rd, SBI 4th , Corporation Bank 5th and Bank of Baroda in 6th rank in the level of customer satisfaction out of six selected banks (see table no. 4).

**Conclusion :**

The survey shows that the e-banking service is providing better customer satisfaction. While some customers are extremely dissatisfied with system availability, service fulfillment, efficiency,

responsiveness and problem solving process of the banks. 6.7% of customers are disagree with the accuracy in the service, security measures, responsiveness and problem solving process in the e-banking services. All the data shows that by and large most of customers are satisfied with the e-banking services. However, percentage of extremely satisfied customers is low than just satisfied customers in e-banking and 13 to 20 percent customers are neither satisfied or nor dissatisfied with this services. It indicates that there is a need to improve the e-banking service quality.

**Appendix :**

**Table 1: Demographic Profile of the Customers**

Age		Education		Profession/ Occupation		Income	
Segment	%	Segment	%	Segment	%	Segment	%
Below 25	30.0	SSC & Below SSC (10th)	33.3	Employee	36.7	1 Lakh or Below	36.7
25-35	30.0	HSC (12th )	20.0	Professor	6.7	1-3 Lakhs	20.0
36-50	26.7	BA	6.7	Student	6.7	3-8 Lakhs	30.0
51-60	13.3	B COM	13.3	Professional	20.0	15-25 Lakhs	6.7
		B Sc	13.3	Engineer	10.0	Students*	6.7
		MA	6.7	Businessman	13.3	Total	100
		Other	6.7	Other	6.7	* No own income source	
		<b>Total</b>	<b>100.0</b>	<b>Total</b>	<b>100.0</b>		

**Table 2: Frequency of Responses about Service Perception**

	System Availa- bility H <sup>a</sup>	Fulfill- ment H <sup>b</sup>	Accuracy H <sup>c</sup>	Efficiency H <sup>d</sup>	Security H <sup>e</sup>	Cost Effective- ness H <sup>f</sup>	Responsi- -veness H <sup>g</sup>	Problem Handling H <sup>h</sup>
Strongly Disagree	6.7	6.7	00	10.0	00	00	6.7	6.7
Disagree	00	00	6.7	00	6.7	00	6.7	6.7
Neutral	00	00	6.7	13.3	6.7	6.7	20.0	20.0
Agree	36.7	53.3	43.3	33.3	40.0	50.0	46.7	46.7
Extremely Agree	56.7	40.0	43.3	43.3	46.7	43.3	20.0	20.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 3: Spearman's Correlations in Service Quality Dimensions and Calculated Overall Satisfaction**

	System Availability	Fulfillment	Accuracy	Efficiency	Security	Cost Effectiveness	Responsi- veness	Problem Handling
Correlation	.018	.782**	.515**	.504**	.582**	.450*	.816**	.625**
Sig. (2-tailed)	.925	.000	.004	.004	.001	.013	.000	.000

**Table 4: Calculated Overall Satisfaction\***

<b>Bank Name</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
SBI	4.0250	10	.37914
BOB	3.4500	10	1.21063
Corp Bank	3.8500	10	.28504
Axis	4.6250	10	.23385
IDBI	4.4250	10	.25921
HDFC	4.2000	10	.25921
<b>Total</b>	<b>4.0958</b>	<b>60</b>	<b>.64132</b>

\* is mean of overall service perception calculated by all attributes

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# Export Marketing System of Floriculture : Shrivardhan Biotech, Kondigre - A Case Study

Anita V. Patil

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## Abstract :

Floriculture was identified as a sunrise industry and today the export of floriculture products from India has crossed Rs. 300 crore. Our presence in the international market is insignificant. We have only 0.3% share in world exports of floriculture. This paper aims to study export marketing system of floriculture with the help of a case study of Shrivardhan Biotech, Kondigre. Further an attempt is made to review the present status of floriculture sector in India and study export marketing system to identify critical success factors and locate the problems faced by the exporters in floriculture industry. It was observed that the floriculture industry has been growing at a CAGR (Compound Annual Growth Rate) of 15 percent over the past decade, with production area growing at a CAGR of 6.89 percent since 2000-01. However the share of floriculture products in total agricultural exports in India was 0.43 percent in 2008-09. There are enormous problems in the export marketing system of floriculture.

**Keywords:** Export Marketing System, Floriculture, Critical Success Factors

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## Introduction:

Floriculture has now become an important trade in the agriculture sector having immense potential for generating gainful employment, income and export earnings. In the recent years it has emerged as a profitable agri-business in India. Floriculture is consisting wide range of products such as flowers, cutflowers, flowering and ornamental plants, bulbs, tubers, corms, rhizomes, chicory, orchids, mosses etc. There was an increase in the demand of floriculture products in the developed as well as in the developing countries worldwide. The production and trade of floriculture has increased consistently over the last 10 years. Indian roses, carnations, orchids, gladioli and anthurium are having great demand in Japan, Netherlands, USA, Germany and France. India also exports seeds, bulbs, dried flowers, ferns,

leaves and grass. In green houses floricultural crops like roses, gerberas, carnations etc. are grown while chrysanthemum, roses, gaillardia, lily, mary gold, aster, tube rose etc. are grown in open field.

This article focuses on export Marketing system of floriculture. Marketing system is considered to involve physical assembly, handling, storage, transport, processing, wholesaling, and retailing of agricultural products, together with services directly supporting these activities, such as market information, establishment of grades and standards, financing of marketing activities, and price risk management (World Bank, 2006b). Moreover critical success factors of the floriculture industry are identified. Critical Success Factors are the essential areas of activity that must be performed well to achieve the mission, objectives or goals for the business or project.

## Overview of the floriculture sector in India:

Government of India has identified floriculture as a sunrise industry and accorded it 100% export

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oriented status. Floriculture in India, is being viewed as a high growth Industry. It has been found that commercial floriculture has higher potential per unit area than most of the field crops and is therefore a lucrative business. By adopting hi-tech cultivation practices taking place under controlled climatic conditions inside greenhouse, commercial floriculture has emerged as a profitable business

for farmers as well as corporate sector. Besides export, floriculture has opened up a new source of employment for women in the rural areas of India. The important floricultural crops in the international cut flower trade are rose, carnation, chrysanthemum, gerbera, gladiolus, gypsophila, liastris, nerine, orchids, archilea, anthuriu, tulip, and lilies.

### Area and Production:

**Table 1 : Area and Production of floriculture in India**

Year	Area (In 000' Hectors)	Production	
		Loose (In 000' Metric Ton)	Cut (Million No.)
1993-94	53	233	555
2001-02	106	535	2565
2002-03	70	735	2060
2003-04	101	580	1793
2004-05	118	659	2071
2005-06	130	656	2921
2006-07	144	880	3716
2007-08	161	870	4342
2008-09	167	987	4794

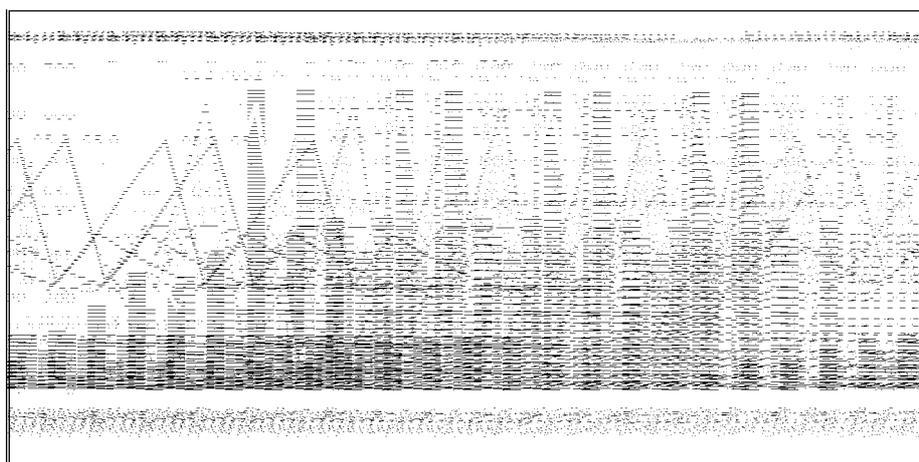
Source:- *Indian Horticulture Database 2008, 2009.*

About 167 thousand ha area was under Cultivation in floriculture in 2008-09 which included traditional flowers such as marigold, jasmine, aster, rose, chrysanthemum, tuberose and modern flowers like carnation, rose, gerbera, gladiolus, anthurium. Production of flowers are estimated to be 987 Mt of loose flowers and 113618 million of cut flowers in 2008-09 . West Bengal (44.3%), Maharashtra(11.9%), Karnataka(12.2%), Gujarat (10.6%), Uttar Pradesh(7.2%), Uttaranchal(4.3%), have emerged as major floriculture centers.

### Exports:

Indian floriculture industry has been shifting from traditional flowers to cut flowers for export purposes. In the recent years, a number of large

Corporate Houses such as ESSAR group, TATA group, Birla, Nagarjuna and Pariwala have also invested in the flower sector. There were more than 300 export-oriented units in India. However many of them operate at less than their capacity. India's total export of floriculture products was Rs 368.8 Crores in 2008-09. Over 95% of Indian cut flower exports comprise different varieties of roses. The domestic flower production goes on increasing annually. Technical collaborations with foreign companies have been approved for India, in order to increase total share in the floriculture world trade.



% Change

Source: (DGCI&S Kolkata)

India's exports of floriculture products was Rs. 116.7 crores in 2000-01 and it was increased to Rs. 250.47 crores in 2004-05. Exports increased to Rs. 652.7 crores in 2006-07 but decreased by 48 percent due to global recession and reached to Rs. 340.3 crores. In 2008-09 exports increased marginally and reached to Rs. 368.8 crores registering 8.38 percent growth.

The world market of floricultural products is increasing by 10 to 15% per annum. With such growth rate, export of floriculture products is

expected to reach US\$ 16-18 billion by 2010. India ranks 23rd among world exporters, however her share in the world trade is negligible. Developed countries in Europe, America and Asia account for more than 90% of the total world trade. The Netherlands dominate the world floricultural industry and is becoming the epicenter for world flower trading. The biggest export market was USA importing 19.56%, cut flower followed by Netherlands (16.23%), UK (11.62%), Germany (10.75%) and Japan 0.04% in 2008-09.

**Table 2: India's Export of Floriculture: Top 10 Countries**

Country	2006-2007		2007-2008		2008-2009		Percent Change in value		
	Qty	Value	Qty	Value	Qty	Value	2006-07	2007-08	2008-09
USA	9676.99	75.21	9371.85	70.68	7111.45	72.14	-1.00	-6.02	2.07
Netherland	4335.58	44.78	4745.58	45.14	4640.16	59.87	62.90	0.80	32.63
UK	4300.34	36.04	4215.22	40.45	4369.65	42.84	16.26	12.24	5.91
Germany	3849.89	31.02	4200.85	35.05	3589.75	39.66	27.29	12.99	13.15
Japan	8323.5	325.54	1835.02	32.77	965.34	17.91	476.79	-89.93	-45.35
Ethiopia	360.84	11.27	1232.5	19.71	98.95	16.57	248.92	74.89	-15.93
Italy	1765.76	11.16	1228.13	9.59	1268.31	13.73	21.57	-14.07	43.17
Canada	385.18	3.15	546.88	5.59	782.35	11.35	146.09	77.46	103.04
U Arab Emts	1075.03	9.27	660.23	6.85	762.7	9.92	45.07	-26.11	44.82

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Belgium	646.21	7.16	496.18	4.92	1084.25	8.45	34.59	-31.28	71.75
Other	7824.99	98.07	7706.99	69.4	6124.55	76.36	61.41	-29.23	10.03
<b>Total</b>	<b>42544.31</b>	<b>652.67</b>	<b>36239.43</b>	<b>340.15</b>	<b>30797.46</b>	<b>368.8</b>	<b>116.52</b>	<b>-47.88</b>	<b>8.42</b>

Source: )DGCIS Annual Report and author's calculation)

Agricultural and Processed Food Products Export Development Authority (APEDA) is looking for export promotion and development of floriculture in India. APEDA initiated various schemes like transport assistance scheme, setting up cold storage and cargo handling facility, infrastructure development/up gradation assistance, special schemes for the North East states, promotion of Agri export zones for floriculture etc. Six Agri export zones have been set up in the states of Sikkim, Tamil Nadu(2), Uttaranchal, Karnataka and Maharashtra. National Horticulture Board (NHB) has also initiated various schemes to promote floriculture industry. An analysis of the floricultural industry reveals that India has immense potential for export of floricultural products.

#### **Shrivardhan Biotech, Kondigre- A Case Study**

'Shrivardhan Bio-tech', one of the largest and most hi-tech Cut flower project was established during the year 1997-98 by Shri Appasaheb S. R. Patil Chairman of the most successful Co-operative sugar factory of the country. Shrivardhan Biotech is now one of the biggest growers/exporters of dutch roses from India, having 35.40 hectare area under cultivation in greenhouses. They are also growing dutch gerbera (35 varieties) under greenhouse (36000 sqm) and recently planted dendrobium (16000 sqm) and anthurium (3000 sqm) under shed houses. With the help of ideal climate, sunlight, temperature and other infrastructure for production, excellent quality roses are grown throughout the year. The quality of roses and packaging is according to international standards. "Quality and Shrivardhan" are synonymous in the cut-flowers business in India. Qualitatively this project can be competed to any best Cut flower project in the World. They

are receiving orders from prominent flower traders in Netherlands, Italy, Germany, Greece and Japan.

#### **Historical Background :**

Shri. Appasaheb Sare Patil was inspired by Shri. Shripal .M. Joshi and Achutrao Patvardhan, the two towering figures in Indian Socialist Movement & Freedom fighters who visited the project site in 1981, to establish a model unit at the site with a State-of-the-Art technology and yet commercially viable. The idea was turned to reality and Shri + vardhan took birth as Shrivardhan Bio-tech Kondigre, during the year 1997-98 with absolute commitment to quality, innovation and cost control. Appasaheb Sare Patil and his son Ganpatrao Patil, are highly respected in the state for their contribution in "Innovative Horticulture, Co-operative Movement & Public Service".

Shrivardhan Biotech is a Partnership firm engaged in Manufacturing and Export of flowers. Mr. Ganapatrao Patil, started flower cultivation in 1997 on 4 acres of land with Gerbera, Capsicum and Carnation. After the success of first year, he immediately made expansion plan for another 7 acres with Rose cultivation in soil-less culture. Slowly more & more area was cultivated under Green House and today the total area of Green House cultivation is approx 88.5 acres. This landmark has been achieved after a lot of efforts & homework in the selection of location, right technology to suit local conditions, appropriate varieties and emphasis on post harvest technology combined with excellent management skills and marketing insight of the world flower trade.

The farm, is ideally located at Village -Kondigre, Taluka- Shirol, Dist -Kolhapur in the state of Maharashtra. The existing area under cultivation is 35.40 Ha. ( 88.50 acres) under greenhouse /

shed-house cultivating Roses, Gerbera, Camation, Dendrobium, Anthurium, Chrysanthemum orchids, Exotic vegetables and Capsicum. The partners of the firm Mr. S.R. Patil & his son Mr. Ganpatrao Patil raised their own funds and Bank of India has extended timely and adequate support to start with and in expansion of the activity. The assistance from NHB and APEDA further eased the financial burden.

#### **Marketing System of Shrivardhan Biotech :**

The Marketing system followed by Shrivardhan Biotech is mainly focused on product. The product varieties, it's quality, the cultivation practice is of immense importance in the floriculture business. The products are mainly distributed directly to the foreign customer. The other important aspects in the marketing system are- post harvesting, grading, packaging, transportation, testing etc.

#### **Input Supply :**

A world class genetically superior planting material was imported from Holland which was 100% licensed, produced under high health condition from breeder of international repute- Pressman B. V., Holland. These patented and latest varieties are not only highly productive but also a good performer at Dutch Auctions.

#### **Production :**

##### **Poly Houses :**

Shrivardhan Bio-tech uses best technology suiting local conditions for optimum production. The cultural practice, pest control methods and modern techniques of production covering relevant inputs, equipment's, drip & mist irrigation systems are being used to make this project a model rose farm in India. It is the largest project in India using coco-peat as growing media with computer controlled plant nutrition system. They have a fully involved management team to look after all these activities.

##### **Cultivation :**

At Shrivardhan Bio-tech they are using environment friendly, hand-made baked clay containers, made by the artisans in rural India. In

this way they provide much needed employment. These containers help keep the root zone cool during summer, thus stimulating the growth of white roots, (so essential for the production of crop hormone Cytokinins for good / healthy crop ), by evaporating water cool in earthen pot. Coco-peat (Cocus nucifera) is used as growing medium, which is an organic matter with excellent aeration and eco-friendly thus helping an unfertile, rocky land to be put under productive use.

These earthen pots are mounted on 50 cms high 8 mm steel stands. This system is simple, cost effective, allowing sufficient ventilation, space for leaf canopy and crop sanitation. This helps reduce the cost of expensive pesticides and thus make the produce more competitive and devoid of pesticide residue. There is adequate supply confined to international standards.

This is the first project in the country, and perhaps in the world.

#### **Water Management System :**

They have pumped water for the project from a distance of 9.5 KM and have water storage tank for 3 Million Liters. This is further treated / standardized to pH of 6.5 in a pre-acid Tank with One million Liter capacity before fed into the system such that Nutrition to the plants flows with accuracy of pH and desired EC

#### **Computer controlled nutrition system :**

Shrivardhan Bio-tech has installed a computer controlled nutrition system from Vanvliet Ltd Great Britain, now Hortimax and Elder Shany Israel each with a capacity of 60 LM/ hour to control, monitor & correct, the quality of nutrition in terms of volume, frequency, pH & EC. Such growing parameters are of critical importance to improve the productivity and quality of finished produce per unit area.

#### **Technical Support :**

A direct relationship of collaboration and support from Pressman B.V. Holland and its subsidiary

Pressman India Breeding Pvt. Ltd. was established, allowing thereby a free flow of technology, experience and technical support in all technical and commercial matters. A cost-effective crop management system was developed keeping in view rather unfavorable local climatic conditions.

### **Marketing Mix**

#### **Product varieties :**

Today Shrivardhan are growing 29 varieties of roses with daily production of 80,000 flowers. Gold Disc, Classic Kaukasus, Classic Fabio, Bright Disk, Baston Indira, Hot Disc, Lucinda Yellow Venus, Lady Queen, Victoria Dollor, Lovely Disc, Kozak H 99 - H 29, Ponnd Sterling 99 - 22 - 61 Emery, Bianca Plata, Nova Zembla, Frisbee, Cosmo, Guilder, Venus, Escudo, Isla Bonita, Full Moon, Salmon Disc, Sublime, Jolly Disc, Beauty True Love Disc Roses - Passion Masai, First, Sky Line Yellow, Sphinx Yellow, Bianca White, Pollo White, Flinstrone Orange, Sublime Pink, Sweetness Pink.

#### **Post harvesting operation :**

Utmost care is taken for post harvest technique in terms of handling the cut flowers from harvesting in polyhouses to dispatch. High standards of grading and sorting are maintained and no compromise is made as far as the qualitative selection is concerned. Effective cold chain is ensured till the last moment of delivery of flowers to the Airline Cargo Terminals.

#### **Grading, Standardizing, and packing :**

As this product is perishable, after harvesting it needs cooling upto 4 to 5 hrs or for a single night at 2° C to 4° C. After cooling, sorting is done considering stem length, colour of flower and opening stage from budding stage. In short, this process contains primary cooling, grading, standardizing, bunching and then the bunches of flowers are packed in cartoons in 6000 sq. ft. packaging hall. Packaging is done in Five ply corrugated boxes. However modern packaging techniques should be made available for flowers.

#### **Cold Storage :**

After packing cartoons are stored in the cold storage room having the area 4000 sq. ft. for pre-cooling of the flowers

#### **Quality Control-Value life testing :**

Based upon the recommendation of Mr. Andri Bakka Quality Controller of MVA, Holland and based on the guidelines provided by Mr. Bipin Deo of APEDA, they have commenced a systematic rose life-testing center with continuous monitoring it on project. Importers specify quality standards which include size, colour, packaging, storage, testing, trademark and chemical residues. Pre-export certification is required. GSP certificate for Europe and Phytosanitary certification is required.

#### **Brand name :**

Products are sold under different brand names for different varieties which are popular in particular locations.

#### **Pricing :**

FOB (Free on Board) Pricing is prevailing in the company. Logistics cost is highest, followed by marketing and overhead cost and product cost in the cost structure.

#### **Distribution Channel used :**



The flowers are sold directly in the foreign markets of Japan (August to March), Italy and Greece (November to March), and Australia ( July to September).

#### **Transportation through refer van :**

Pre-cooling of the boxes after packing of flowers is done to maintain the temperature during transit time as well as to keep the freshness of the flowers. They have two refrigerated vans for transportation up to Mumbai Airport, maintaining the temperature from 2 d. c. to 4 d.c.

#### **Journey of Flowers :**

After harvesting freshness of the flowers remain

for 14 days. The journey of flowers is as follows-  
 First day- Sorting  
 Second day- Packing  
 Third day- Local transport  
 Fourth to fifth day- Air travelling  
 It reaches to market on fifth to seventh day and it stays at market for about seven days.

regarding variety of flowers, demand, length of stem of flower and quality required.

**Competitors** Kenya is the largest competitor for Rose in Japan market.

**Export :** The export performance of the company is as follows-

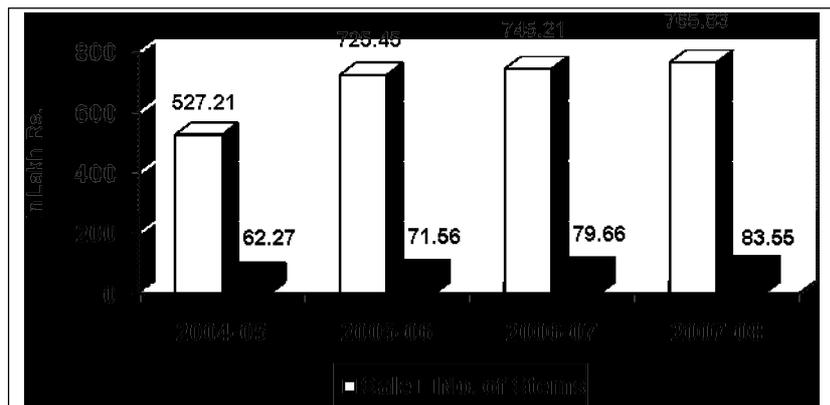
**Market Information :**

Daily market database is taken from internet

**Table 3: Export Performance of Shrivardhan Biotech**

	2004-05	2005-06	2006-07	2007-08
Export Sale	527.21	725.45	745.21	765.83
No. of stems (Roses)	62.27	71.56	79.66	83.55
<b>FOB Value</b>	<b>181.48</b>	<b>273.51</b>	<b>331.60</b>	<b>335.51</b>

**Graph 1: Export Performance of Shrivardhan Biotech**



Continuous growth is observed in the export of the company. There is enormous potential in export of floriculture in near future.

**Export Destinations :**

Generally flowers are exported to Italy, Germany, Australia and Japan. The main market is Japan, as Japanese people use flowers daily to decorate homes. There is more demand in Japan and the profitability is also high.

**Recent Trend :**

The flower export market of Rs. 300 Cr. is likely to shrink 15-20% due to global recession. The industry foresees a price rise by 10% due to

doubling of fertiliser cost. According to VSL Agro Tech manager V Srinivas, "The cost of production for a single stem of rose has increased from Rs 1.50 to Rs 1.70. We have stopped exporting to Japan and Europe that contributed to 60% of our exports till March 2008." The overall sales have also gone down by 25%. Shrivardhan Biotech CEO Ramesh Patil says, "Our flower sales have dipped from Rs 6.5 crore to Rs 5 crore in the current year."

Pushpam Florabase CEO, N. Manjunatha Reddy says: "Our profit margins have been reduced to half owing to higher delivery and production cost."

Besides, the increase in petroleum prices has led to the increase in packaging material, such as polythene PP covers. Even the price of corrugated boxes has doubled. All this has affected exports of floriculture industry to markets like Europe, Japan, China and US.

### **Findings:**

#### **Critical Success Factors of the firm :**

After analysing the case study, we found the following factors which are essential areas of activity that were performed well to achieve the objectives of the organization.

1. *Availability of Start-Up Capital* - Capital was available from Bank of India,
2. *Research & Development* - Use of environment friendly, hand-made baked clay containers, made by the artisans in rural India, use of coco-peat as growing media with computer controlled plant nutrition system.
3. *A world class genetically superior planting material:-* Planting material was imported from Holland which are not only highly productive but also a good performer at Dutch Auctions.
4. *Cost Effectiveness-* Use of earthen pots mounted on steel stands helps to reduce the cost of expensive pesticides and thus make the produce more competitive and devoid of pesticide residue.
5. *Availability of Skilled women workers-* Skilled women workers are available in sufficient quantity.
6. *Energy, Transportation, and Information Infrastructure:-* Availability of electricity, refer vans, internet connectivity etc. Daily market database is taken from internet.
7. *Marketing and management Competence:-* Acquiring new customers and distributors.
8. *Quality of product :-* High standards of grading and sorting are maintained and no compromise

is made as far as the qualitative selection is concerned. There is a systematic rose life-testing center with continuous monitoring it on project.

#### **Problems in Export Marketing of floriculture :**

Though there exists a vast potential for development of this industry, there are innumerable constraints which are required to be overcome.

1. *No Agriculture Recognition:-* Hi-tech green house based floriculture projects are recognised by some states as agriculture activity and some states call it industry.
2. *Lack of International airport facilities:-* The International airport facilities are not available at major growing centres, has affected direct transport of flowers. The infrastructure facilities available at the major international airports for handling the flowers are very limited which sometimes resulted in greater loss of flowers.
3. *High Air-freight rate :-* The air freight is very high and accounts for 30% of the cost.
4. *Poor Infrastructure :-* At present most of the roads leading to hi-tech farms are in poor condition.
5. *Poor Quality of Product* - Quality of product should be paste and disease free. Size of leaves and buds should be as per specified standards.
6. *Lack of single window-* The agencies that interact with hi-tech agriculture units are APEDA reporting to commerce ministry, NHB reporting to agriculture ministry and NABARD reporting to finance ministry. This creates wrong priorities and lack of synchronisation of decisions. Regulation is complicated and time consuming.
7. *Uncertain Market size :* Grower is not confident as to whether present market size of floriculture shall be adequate to consume

increased volume of floriculture product in future. Confidence regarding assured market of floriculture may be able to motivate growers to expand their current size of floriculture business.

8. *High Input cost* :Unlike traditional agriculture, cost of planting materials, green house construction is high in floriculture which requires high investment. Maximum percentage of the growers is unable to invest in procurement of high cost input for expansion.
9. *Inadequate Input supply* : Input supply of planting material such as seeds, corms, bulbs, tubers cuttings etc. at proper cost is lacking, There are only few options for input procurement for growers .Thus options for input quality choice for the general growers are limited.
10. *Poor Infrastructure to store produce*: Floriculture product being highly perishable needs to be stored in cold storage to maintain its quality which again determines the market value .
11. *Lack of Technical knowhow*: Required proper technical knowhow for cultivation and on post harvest handling and marketing is not sufficient.
12. *High interest rate* - The interest rates on credit borrowing by financial institutions are not reasonable which result in high cost of production of flowers.

#### **Suggestions :**

#### **Strategies for strengthening Export of Floriculture**

Following strategies can be suggested to improve the status of floriculture industry.

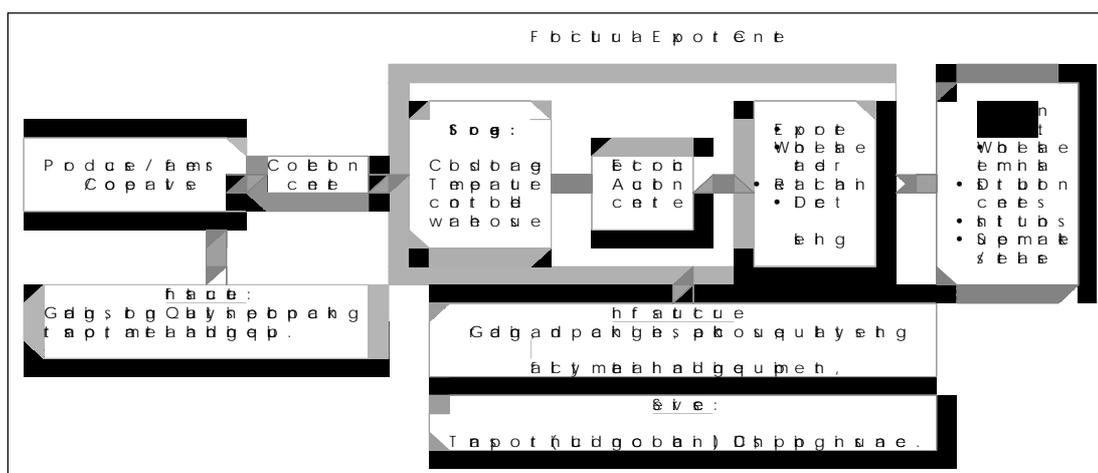
1. Entrepreneurship training have to be given to the farmers to take up floriculture activity. The implementation and adherence to quality

assurance measures is possible only through trained manpower. Therefore, long-term educational programmes and short-term training programmes are required for developing manpower for sustainable floricultural exports.

2. Adoption of advanced technology for production and postharvest handling is very essential. Grower's awareness and involvement in maintaining quality standards have to be enhanced. Plants and seeds of high quality and latest international varieties at reasonable cost and sufficient quantity of planting materials of selected clones has to be made available. Reduction in import duty of planting material and equipment has to be ensured. Due to lack of knowledge of production technology, the quality of produce is low and do not confirm to international standards. Therefore advanced technology should be used for production.
3. As there are huge post harvest losses, the maintenance of cold chain system including pre-cooling and insulated refrigerated transportation from production centre to destination of export is essential. For this, refer vans, refer containers with temperature controlled system have to be used.
4. Introduction of flower auction centre for more transparency in trading. This method of selling is known as the 'Dutch auction' which is used successfully in Holland. A very wide and deep assortment of flowers and plants can be made available though the auction clocks on a daily basis. The projected clocks can be used to offer all information to buyers. This allows the grower to display logo and photographs while their products are being auctioned. This assists buyers in their purchasing decisions.
5. Innovation in supply chain management. Reduction in air freight and provision of sufficient cargo space in the airlines have to be ensured.

6. Need of Public private participation with backward and forward linkage is essential to improve the situation. Six Agri Export Zones should provide more impetus to boost export.
7. Branding is very essential element in international market. Brands add value to the product. However very few Indian companies developed their own brand. There is a need to develop 'Brand India' for promotion of the floriculture product.
8. Schemes for export promotion and assistance by APEDA and NHB have to be disseminated properly to the growers.
9. Efficiency in marketing system and reduction in number of intermediaries to reduce the cost and give remunerative returns to growers should be ensured.

### Proposed Marketing System:



#### Action Plan for Functioning of the model:

**Step 1 :** Identifying cluster areas and organising awareness camps of the farmers to take up floriculture activity - The cluster based approach offers economies of scale in operation, better access to technology, information, greater access to customers, channels and better value realization and cheaper access to inputs and raw materials.

**Step 2 :** Providing all infrastructure facilities at collection centers at various locations in the cluster area.

**Step 3 :** Establish floricultural Export centre at identified place with Public-private participation-State Govt. will invest for the centre and establish it at identified place. Infrastructural facilities will be provided by District rural Development authority (DRDA). Private enterprises will provide storage, packing, transportation, banking, quality testing etc.

**Step 4 :** Foreign buyers contact to the export centre and participate in auction physically as well as through on-line.

**Step 5 :** Directly after the flowers and plants are sold, they have to be moved to the distribution area and transported to the customers immediately.

**Step 6 :** - High level of computerisation and ICT ( Information and communication technology) is used in export centre for smooth functioning.

**Step 7 :** Monitoring the project through Inspection Committee appointed by Govt.

#### Conclusion :

In India, commercial floriculture has emerged as a high-tech activity taking place under controlled climate conditions inside greenhouse. The Indian floriculture industry is faced with a number of challenges mainly related to trade environment,

infrastructure and marketing. Besides the global recession affecting significantly the Indian floriculture exports, the competition in the international market has also been increasing with the entry of Ethiopia, Tanzania, China, Nepal, Sri Lanka and Pakistan.

At present, the cultivation is dependent on foreign technology. So, steps have to be taken to promote indigenous technology. Besides this, units all over the country must have a common platform for information exchange and more importantly for marketing. We need to create brand recognition for Indian floriculture. There is a need to start auction centres in the country. Training centres and programmes for skill development in floriculture may be established to improve quality and efficiency. Establishing a network of support systems with the involvement of Government, private sector and research institutions / universities will be another strategy for development of the floriculture sector.

Now a day flower retail shops have mushroomed all over world and supermarket chains like TESCO, Wal-Mart, Metro, K-Mart etc. are looking for large quantities and latest varieties of flowers. Therefore, Indian floriculture exporters should

emphasize developing other diversified products which are in great demand. Now floriculture in India is becoming an attractive commercially viable diversification option. Several companies involved in agri business are set to venture into this sunrise industry.

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# People's trust for Public Finance

**Girish P. Jakhotiya**

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Mr. Ramlingam, chairman of the Durga Group is discussing today with an American delegation about his plan of expanding the group's micro-finance activity. American Foundation for Entrepreneurship (AFE) showed interest in financing the micro-finance business of the Durga Group. The delegation was impressed with the credentials of Mr. Ramlingam and his group. AFE was ready to invest 50 million dollars initially in the 'Durga Women's Entrepreneurship Cooperative Society'. Its delegation flew down from New York to Chennai to discuss and decide the design of the joint venture. It knew that Mr. Ramlingam and his group got many prestigious industrial and social awards for their good work of last twenty years.

Ramlingam did a very humble beginning of his professional career. His father was a well-known Sanskrit scholar and priest in the city of Chennai. Ramlingam got his BE degree in automobile engineering and joined a reputed auto company as a sales executive. He rose very fast in his corporate career and became 'general manager' at an early age of 33. His company awarded him several times for his extraordinary entrepreneurial skills. As a part of its dealership expansion plan, the company suggested Ramlingam that he should accept its dealership and contribute more entrepreneurially. The company was willing to supply him vehicles and spare parts on credit and also share some of his initial business costs. Ramlingam took this opportunity and started his own dealership business. He formed a private limited company and invested his savings.

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With his automobile experience, Ramlingam could easily establish himself as a hardworking, smart dealer within two years time. He now decided to expand his business. Most of the present assets were taken on lease. His priority now was to own these assets, open-up a state-of-the-art workshop and also an additional sales branch on the outskirts of Chennai city. The challenge was of raising finance for this expansion. A suggestion came from his wife. She proposed that he should appeal to the local people for their small deposits. Being a private limited company with a moderate size, people would not have shown interest in the shares of this dealership enterprise. They would certainly deposit their savings with a guaranteed rate of interest. But Ramlingam's wife's confidence was based on the reputation of her father-in-law.

Ramlingam accepted his wife's suggestion and appealed to the local people for small deposits. He offered them one percent more than the bank's interest rate on medium term deposits. He asked these small depositors to invest in his company for three years. To his surprise, the response from people was fabulous. Ramlingam got funds more than his requirement. He returned the extra funds with great humility. Meanwhile a few young and energetic auto engineers joined him.

Very soon Ramlingam converted his dealership to the status of a 'public limited company'. This was essential for raising funds and growing further. His 'principal' company was observing his sincerity and efficiency in servicing the small deposits invested by common people. The company offered him a loan at a concessional rate and with long repayment schedule. This was for putting up a body-building workshop and two more garages on the outskirts of the city.

Ramlingam always believed in transparency. Voluntarily he started conveying about his business

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**People's trust for Public Finance**

details on a quarterly basis to his depositors. This built-up his company's reputation further in the capital market. A few giant banks approached him showing interest in financing his company at a very competitive rate of interest. Ramlingam assured them that he would accept their help at an appropriate time.

Ramlingam's old friend, an investment banker advised him to get his business valued. Such valuation was necessary for deciding the issue price of fresh shares to be offered to public. Ramlingam too wanted to raise funds through the 'equity route' by issuing shares at a fair price to small investors. He deliberately avoided institutional and high net worth individual investors. He knew that his father's reputation was great. People were ready to park their funds with him. It was this 'public trust', which was his great strength. He strongly believed that people must participate in the collective process of creating wealth. After doing an appropriate valuation, a public issue was made. It was oversubscribed.

With this fresh equity, Ramlingam created a subsidiary company to make a few auto spare parts. His principal company encouraged him to do this. He now became both, a dealer and a vendor. He being very familiar with the entire value chain of the automobile industry, the business of making auto spare parts was not difficult for him. Within three years, this subsidiary company got good reputation even with the foreign partner of the principal company. Ramlingam started supplying spare parts to a few new customers based in Europe.

After couple of years, Ramlingam's elder son, Ramana joined him. Ramana did his MS from a well-known American university. Before joining his father's business, he worked for two years in an American auto company's research and development centre. Ramana had a dream of building-up a fine 'auto product development centre' at Chennai. This centre was supposed to develop specific spare part designs for reputed auto companies from India and abroad. Ramana was

ambitious. He wanted this centre to employ a few foreigners with excellent research background. Ramlingam decided to support his son. Ramana's dream project was an extension of his father's value chain. India's talented pool of young automobile engineers was a great advantage, which Ramana wanted to exploit.

This project development centre needed huge investment in machines, premises, open space for trial runs etc. The question was of financing this new project. Although a few big banks were eagerly ready to finance this project, Ramlingam asked his son to think about some better solution. After doing a few detailed discussions with his friends working in the American financial markets, Ramana decided to take a big step. He appointed a 'fund adviser' from the USA, who was expected to provide linkages with some of the 'public finance institutions' from the USA. This decision proved to be right. Ramana got three opportunities to present his proposal for funding from the USA. A reputed 'Pension Fund' was quite impressed with the business philosophy of Mr. Ramlingam and his overall humble background. This fund asked Ramana to arrange for the visit of its delegation to India and see the functioning of Ramlingam's companies.

The Pension Fund's delegation stayed in Chennai for five days. It interviewed some of the small depositors and investors of Mr. Ramlingam's company. The businesses run by him were now called collectively as 'Durga Group'. The delegation also inspected some of the projects conducted by this group with the doctrine of 'Corporate Social Responsibility' (CSR). The delegation spoke to a few very senior executives from the principal company with which Mr. Ramlingam started his career. Overall, the delegation of the American Pension Fund was quite impressed with the Durga Group and its chairman Mr. Ramlingam. It was also very happy with young Ramana and his presentations. On the last day, it expressed its complete willingness to finance Ramana's dream project. It also suggested

Mr. Ramlingam to avail of its funds for the expansion of his present business.

The Pension Fund offered finance at a pretty low rate of interest to the Durga Group. The interest rate subsidy was almost equal to 50% of the present interest rate paid by Mr. Ramlingam. Getting additional funds from this American public institution was very tempting but Mr. Ramlingam avoided this temptation. Some of his well-wishers advised him to take this cheaper American fund and repay the deposits of local small depositors. This was absolutely against the ethics so far followed by Mr. Ramlingam, although it could have been a right business decision. These small depositors gave the initial strength to the Durga Group when it was too small and not so known outside Chennai.

Ramana carried out his strategic plan very systematically. He and Ramlingam selected a young team very carefully. The product development centre got reasonable number of business orders from Indian and foreign companies in the first year of commercial launch. Ramana built-up this centre using all international standards. Within four years, the centre became quite known in the automobile industry. This enhanced the overall valuation of the Durga Group's shares in the market. The group was now quite well established. Ramlingam's younger son, Narayana joined him after doing his MBA in international marketing. His two daughters-in-law too joined the Group and started devoting considerable time for the growth of business.

Ramlingam knew that many of his depositors were facing problems of unemployment, rising cost of living and shrinking source of income. It was time to help them out. Ramlingam thought that 'group entrepreneurship' was the only approach to enrich these depositors. He, with the help of his elder daughter-in-law, formed a 'micro finance company'. Ramlingam with his team visited Bangladesh and studied the functioning of the Gramin Bank and small entrepreneurial groups. It was a massive network developed by Mr.

Mohammed Yunus. He spoke to a few groups of small entrepreneurs and tried to understand their aspirations and achievements. The visit to Bangladesh also educated him about the 'global network of micro-finance'. He returned to India with an enlightened soul and a sharp visualization of his new venture for the disadvantaged small depositors of Chennai.

Ramana, through his network and with the support of his present financier, the American Pension Fund, could contact a few reputed financial institutions specializing in the field of micro-finance. Two financial institutions sent their representatives to Chennai to study and decide the viability of this project. As expected, the representatives were impressed with the present 'CSR' initiatives carried out by the Durga Group. They were very delighted after they met the groups of small depositors and other disadvantaged people. All of them showed their total trust in Ramlingam's leadership.

Ramlingam knew that micro-finance was a social activity. But he was also aware of the fact that this social initiative was to be carried out carefully for boosting entrepreneurship at grass root level. It was not at all a charity show. Borrowers were expected to use the funds efficiently and return them on time. They were expected to pay marginal interest too. A few micro-finance companies were not doing well either because the beneficiaries did not return the loans or the promoters of these companies misappropriated the funds. There was a serious impact of political interference also. Micro-finance was being used for ugly political gains. Ramlingam never had any political inclinations. He didn't use any political patronage to promote his business.

Ramlingam formed 'Durga Women's Entrepreneurship Cooperative Society'. The society was amply funded by both the American institutions. Ramlingam constituted an independent committee of socially and professionally reputed persons from Chennai to supervise the use of funds. The women borrowers

and other disadvantaged people were also encouraged to deposit their petty daily savings with the society at a reasonable rate of interest. The society got its momentum within a year. Within three years, it became a role model for others. It got international recognition.

The micro-finance initiatives of Mr. Ramlingam brought huge goodwill to his Durga Group. 'Durga' became a mother brand in Chennai and surrounding area. Obviously, this mother brand was now doing wonders for Mr. Ramlingam. Many foreign and Indians banks were now queuing up outside his office to get associated with him. His younger son, Narayana took the control of finances of the group under his father's supervision. Both of them knew that the bankers and other financial institutions were only keen to take share in the growing prosperity of the Durga Group. Also the free flow of funds was dangerous without any appropriate investment plan.

Ramlingam, Ramana, Narayana and the two daughters-in-law were now seriously thinking the next milestone of growth. The comprehensive value chain of the auto industry was always available to the Durga Group to grow. The family was of a firm view that the common people who supported it during its entire journey should benefit from the group's future growth. People's trust and public finance were the two strong pillars of the Durga Group! The Ramlingam family was wise enough not to forget this sacred reality.

#### **Questions for discussion**

1. How do you assess the importance of 'People's Trust' in raising public finance adequately?
2. How do you evaluate Mr. Ramlingam's strategies for connecting people's trust and public finance?
3. Can you correlate this case to the success of a reputed Indian bank, which has collected huge public funds and managed them effectively?

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