

# JIM QUEST

*Journal of Management and Technology*

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**Fair Trade Alliance Kerala and Marketing of Organic Commodities: A Case Study of Kasaragod**  
*N. Karunakaran & Silna Thomas*

**Behavioural Change of Ingesting Pattern: A Demographic Study Among Six Districts (W.B)**  
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**The Effects of Entrepreneurs Characteristics on Loan Repayment Behaviour of MSMEs**  
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**A Study on Falling Female Employment during High Growth Period in Indian Economy**  
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**Affordable Housing in India: Issues and Directions for Reforms**  
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**Performance of the Micro, Small & Medium Enterprises (MSMEs) Manufacturing Sector in Select States in India: The Concept of MSME Manufacturing Business Facilitator (MSME-MBF) Index**  
*Mr. NiharRanjan Jena & Dr. (Mrs.) Lina R. Thatte*

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# JIM QUEST

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## From the Desk of the Chief Editor

We are pleased to launch the Jul-Dec 2017 issue of the 13 volume of our journal, viz. JIM QUEST. Large numbers of research papers were received from various disciplines for publication and we thank each one of the authors personally for soliciting the journal.

The present issue is rich in content and covers some interesting articles. In this issue, we are pleased to present 09 articles that demonstrate new capabilities for infrastructural analysis, sustainable growth, planning and management. The research papers cover areas like Behavioral Change of Ingesting Pattern, The Effects of Entrepreneurs Characteristics on Loan Repayment Behavior of MSMEs, Gender Equality and Development, Affordable Housing in India, etc.

We hope the researchers and social scientists will find key insights and information in all these papers. I, on behalf of the JIMQUEST Journal fraternity, acknowledge our gratitude to all our well-wishers, editors, and contributors for showing patience and reposing faith on us; their cooperation has given us courage to scale new heights.

We thank all the readers profusely who conveyed their appreciation on the quality and content of the JIMQUEST and expressed their best wishes for future issues.

**Prof. (Dr) Daviender Narang**  
Chief Editor



# JIM QUEST

Journal of Management and Technology

Volume 13, No. 2, July - December 2017

## Contents

1. **Fair Trade Alliance Kerala and Marketing of Organic Commodities:  
A Case Study of Kasaragod** 02-06  
*N. Karunakaran & Silna Thomas*
2. **Behavioural Change of Ingesting Pattern: A Demographic Study  
Among Six Districts (W.B)** 07-15  
*Indrajit Ghosal*
3. **The Effects of Entrepreneurs Characteristics on Loan  
Repayment Behaviour of MSMEs** 16-21  
*Dr. Mateen Ahmed Siddiqui*
4. **A Study on Falling Female Employment during High  
Growth Period in Indian Economy** 22-30  
*Pradeep Kumar Panda*
5. **Gender Equality and Development:  
An Economic Analysis in Context of Indian Economy** 31-41  
*Dr. SwayamPrava Mishra & Pradeep Kumar Panda*
6. **Affordable Housing in India: Issues and Directions for Reforms** 42-46  
*Shibani Mishra & Prerna Panda*
7. **An Empirical Study on the Impact of Organizational Learning  
on Organizational Competency** 47-53  
*Dr. Vaneeta Aggarwal & Dr. P. T. Srinivasan*
8. **An analysis of International Arms Transfer in Contemporary World** 54-61  
*Dr. Ganesh Kumar*
9. **Performance of the Micro, Small & Medium Enterprises (MSMEs)  
Manufacturing Sector in Select States in India: The Concept of  
MSME Manufacturing Business Facilitator (MSME-MBF) Index** 62-76  
*Mr.NiharRanjan Jena & Dr. (Mrs.) Lina R. Thatte*

# Fair Trade Alliance Kerala and Marketing of Organic Commodities: A Case Study of Kasaragod

N. Karunakaran\*  
Silna Thomas\*\*

## Abstract

*Fair Trade has spread in developing countries as an initiative aimed at lifting poor smallholder farmers out of poverty by providing them with premium prices, availability of credit and improved community development and social goods. It is also viewed as a market for high value products in the context of globalization and trade liberalization policies. This paper provides a review of the Fair Trade Alliance Kerala (FTAK), focused on the impacts of Fair Trade on price and income and highlights the importance of limited market access and changes in productivity of organic products in Kasaragod, Kerala. Fair Trade Alliance Kerala increased the production of organic crops through giving fair prices, premium and different schemes and methods in Kasaragod. It also provides different policy measures to support the organic farmers by increasing their production. In fair trade farmers are earning high price for the commodities and helps to market the products to the foreign countries with no intermediary.*

**Key words:** Fair Trade Alliance; Marketing; Organic Commodities; Kerala.

## Introduction

In mid-2000s, particularly in south-western India, Fair Trade Alliance Kerala (FTAK) was formed to address the devastating impact of fluctuating market prices on the ability of small producers to earn a stable and dignified livelihood. The prices in the global market for these crops fluctuate dramatically, the farmers have no ability to withstand cycles, plan their future, or make investments (Laura, 2012). FTAK members are participating in the fair trade system, export products, assure minimum price above market price and plan more confidently their future and reinvest in their farms for social projects (Karunakaran and Libin Thomas, 2014). Fair trade thus is a social movement with stated goal to help producers in the developing countries to achieve better trading condition to promote sustainability (Kristen, 2011).

Agriculture is the main source of income in Kasaragod district and major proportion of people depend it for their livelihood. Recently, farmers shift their cultivation practices from chemical to organic farming. Organic farming is eco-friendly, which promote sustainable development and protects the fertility of soil and ensures the long term crop income. But in the marketing of organic products the capacity to compete with fertilizer products is weak and farmers earned low income with worse financial situation. In 2004 Kasaragod district was declared as the organic farming area in Kerala; fair trade helps the farmers in capturing fair price for organic products.

Therefore the socio-economic condition of farmers, how fair trade helps to maintain good living standard, sustainability and constraints of organic farming and schemes adopted by fair trade alliance in Kasaragod district are attempted in this study.

## Methodology and Materials

The study is conducted in Kasaragod, which is the organic farming district in Kerala and FTAK was started in 2005. In the district three panchayaths, West Eleri, East Eleri and Balal were selected taking 20 farmers from each panchayath for crops pepper, ginger, turmeric, cocoa, coconut and cashewnut. Primary data is obtained directly from the farmers of these three panchayaths through questionnaire and interview schedule. Secondary data were collected through published articles and journals of FTAK, personal records and government records. Statistical tools and diagrams were used for analysis.

## Analysis and Discussion

Agriculture plays a vital role in the economy of Kasaragod and majority depends directly or indirectly in farming for their livelihood. A wide range of crops and cropping pattern exists in the district where paddy, coconut, arecanut, cashewnut, rubber, pepper, banana and vegetables are important. The agricultural sector is in crisis as in the case with other parts of the state due to fall in price of principal commodities, increasing

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cost of cultivation, low productivity, degradation and lack of market infrastructure.

**3.1. Organic Farming in Kerala:** There is growing importance of organic farming in Kerala; however, there is only 15 thousand hectares of certified organic area in the state. The area under different organic practice is higher but many farmers are not getting their organic farm certified (Bhattacharyya and Chakraborty, 2005). Absence of formal certification by credited agencies also restricts the classification of land under organic farming over time. Major agencies involved directly or indirectly in promoting organic farming include (a) Government Agencies (b) Non-Governmental Organizations and (c) Farmers Group. Major government agencies are the Department of Agriculture, Panchayath Raj Institutions, Agricultural University, State Horticultural Mission, State level offices of the Commodity Boards like Spices Board, Tea Board and Coffee Board and NABARD.

Local self government institutions at panchayath and urban bodies are keen in promoting organic farming during the last fifteen years (Makita, 2012). Almost all panchayaths in Kerala

have initiated poison-free agriculture, with particular focus on vegetables, fruits and banana. Results in terms of adopted practices includes, use of inputs, number of farmers, area under crops covered, production and marketing of commodities, shows considerable variation. Non-Governmental organizations (NGOs) are active for promoting poison-free agriculture, but concepts, approaches and methods followed are different (Valery and Sam, 2009). Concepts used by NGOs include: sustainable, organic and poison-free farming, low external inputs, bio-diversity and safe food. Major non-governmental organizations supporting organic farming in Kerala are:

- (i) Wayanad Social Service Society
- (ii) Peerumade Development Society
- (iii) Kerala Agricultural Development Society and (iv) THANAL

**3.2. Fair Trade Alliance Kerala (FTAK) in the context of organic farming:** Fair Trade Alliance Kerala was formed in 2005 with 4500 farmers in Kannur, Kasaragod, Wayanad and Kozhikode as

Sl. No	Year	Productivity/hectare (in Rs)
1	2009	45714
2	2010	48667
3	2011	58000
4	2012	69315
5	2013	73780
6	2014	73850
7	2015	75460
8	2016	78569

Source: Primary data

an offer for local market access to growing number of organic farmers and is the only mass based farmers led movement in Kerala. It is uniquely positioned to offer fair trade market to products including cocoa, coffee, cinnamon, turmeric, cashewnut, ginger, pepper, cardamom and coconut. FTAK also aimed to enable farmers the access to global market and improved income through fair trade. The basic idea behind this is to promote sustainable development through trade and works according to a range of fair trade principles like fair price, fair labour condition, direct trade, commodity development and environmental sustainability (Chamorro, 2005). Organic

marketing and fair trade are quite different from that of regular marketing and free trade (Benjamin, 2000). In Kasaragod district, FTAK is a social movement whose goal is to help producer to achieve better trading conditions to promote sustainability with the commodities that resort to fair trade including pepper, turmeric, ginger, coconut, clove, cashewnut and coffee.

Fair trade premium receipts grew significantly for both small producers and plantations. The revenue received from fair

Sl. No	Land	Percentage of family
1	Below 50 cent	31.70
2	50 cent – 1 acre	10.00
3	1 – 4 acre	41.70
4	Above 4 acre	16.60
	Total	100.00

Source: Primary data.

trade sales also grew with respect to pepper, turmeric, cashew, coconut, clove, ginger and coffee. In Kerala, this organisation consists of 5300 farming families particularly in the hilly tracks of Malabar. In Kasaragod district productivity of organic farming increased considerably (Table 1). Table 2 shows the acres of land

under possession and it determines the economic status of a person. The organic farmers earn their income through marketing of their products and majority earned more than Rs 50 thousand per annum.

Sl. No	Annual income (in Rs)	Percentage of households
1	Below 25000	16.60
2	25000 - 50000	25.00
3	50000 - 1 lakh	50.00
4	1 lakh - 4 lakh.	8.40
	Total	100.00

Source: Primary data

Table 3 shows that 50 percent of households earned between 50 thousand and 1 lakh rupees and 8.4 percent above 1 lakh rupees.

Sl. No	Age of farmers	Percent of farmers
1	35 - 45	10
2	45- 55	12
3	55 - 65	42
4	65 - 75	33
5	75 - 80	3
	total	100

Source: Primary data

The aged persons are promoting organic farming in the agricultural field compared to others. 75 percent of the farmers are above 50 years, which shows that the aged members are approaching organic products (table 4).

Sl. No	Products	Percent of families
1	Ginger	72
2	Pepper	55
3	Coconut	95
4	Cashewnut	20
5	Turmeric	42
6	Cocoa	92

Source: Primary data

Table 5 explains that 95 percent of coconut farmers and 92 percent of cocoa cultivators are promoting organic farming for earning income. Farmers learned the method of organic farming in different ways (table 6); 58 percent got idea from agricultural officers and 38 percent from friends.

Sl. No	Method of learning	Percentage of farmers
1	Media	4
2	Friends	30
3	Agricultural Department	58
4	Relatives	8

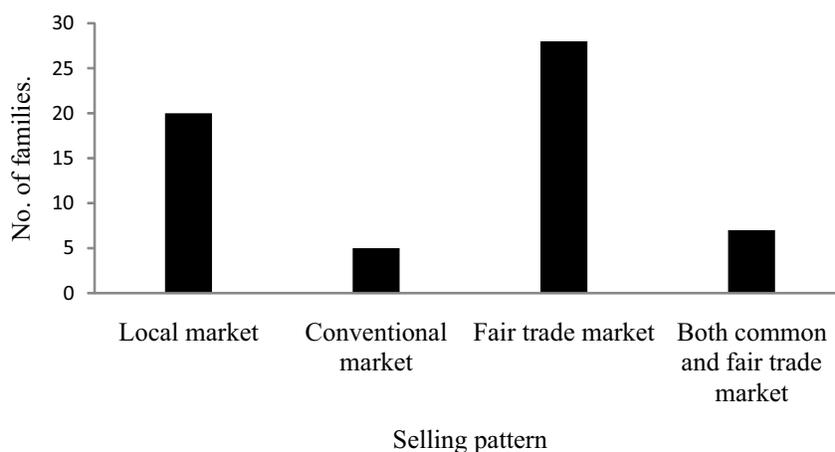
Source: Primary data

Selling pattern of farmers of organic commodities depends on fair trade and local markets (table 7). 47 percent depends on fair trade for selling their organic products, only 8 percent of farmers depend on conventional markets.

Sl. No	Selling pattern	No. of families	Percent
1	Local market	20	33
2	Conventional market	5	8
3	Fair trade market	28	47
4	Both common and fair trade market	7	12
Total		60	100

Source: Primary data.

**Figure 1: Selling pattern of organic commodities**



Organic farmers earned income from the products based on the quality and quantity of products. The prices of crops are different and income earning capacity also related to the product type (table 8). Table 8 shows that 8 percent of the farmers earned below 10000 rupees and 63 percent between 15000-25000 rupees; 12 percent attain more than 25000 rupees from their crops.

Sl. No	Income	No. of the farmers	Percent.
1	Below 10000	5	8
2	10000 - 15000	10	17
3	15000 - 20000	20	33
4	20000 - 25000	18	30
5	Above 25000	7	12
Total		60	100

Source: Primary data.

In the conventional market price is lesser than fair trade market. The price pattern of the marketing channel is given in table 9. It is observed that fair trade alliance offer more prices to the organic commodities and the difference is highest for pepper, turmeric, cocoa and ginger.

Sl. No	Products	Price in fair trade	Price in conventional market	Difference in %
1	Pepper	800	600	25
2	Cashewnut	106	100	6
3	Turmeric	24	14	42
4	Coconut	34	31	9
5	Ginger	40	30	25
6	Cocoa	150	100	33

Source: Primary data

FTAK provide various schemes and policies for increasing organic farming in Kasaragod district (table 10).

Sl. No	Schemes	Percentage of farmers benefited
1	Subsidy	25
2	Pension	8
3	Grants	13
4	Animal Husbandry	34
5	Medical Facility	20

Source: Primary data

The high prices and various programmes of FTAK increased the satisfaction level of farmers and the study revealed that 75 percent of farmers are satisfied in FTAK and organic farming (table 11).

Satisfaction level	Percentage of farmers
Satisfied	75
Not satisfied	25

Source: Primary data

## Conclusion

FTAK create access to global market through fair trade and equitable trading terms and improved income through minimum price and premium. It tried to promote traditional agriculture and sustainable livelihood in Kasaragod, Kannur, Wayanad and Kozhikode districts of Kerala. The farmers cultivated ginger, coconut, cashewnut, turmeric, cocoa, pepper, clove and a variety of products. Fair trade provides higher prices to these products which are higher than the product prices in the conventional markets. Organic products gained significant social and economic importance also as a major foreign exchange earner. It also provided different schemes to organic farmers for increasing their production.

From the analysis it is revealed that the programmes of FTAK in Kasaragod district encouraged agricultural production and productivity. The organic products like pepper, cashewnut, coconut, ginger, turmeric and cocoa have reached high quality from the cultivation and the farmers are benefited in social development, women empowerment and environmental protection. FTAK provided awareness classes to organic farmers and encouraged them by ensuring high prices to the crops. FTAK also helped the farmers for marketing their products in the international market and attain high prices. FTAK thus increased the production and productivity of organic crops and is profitable in Kasaragod district.

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# Behavioural Change of Ingesting Pattern: A Demographic Study Among Six Districts (W.B)

Indrajit Ghosal\*

## Abstract

Although the technology evolve over the years however people takes more time to accept it and adopt in their daily life. Lack of customer acceptance towards new technology remains a big challenge for the marketers. Now a day lot of portals has been launched in West Bengal, few districts of west Bengal has been increased their product sale but rest of the other districts are facing lot of problems on awareness. So the online products are not available in all the districts of west Bengal. The economic growth has increased through these services. This shopping method is still not as well known or accepted as in many other countries, and though the acquaintance of online shopping in India is now beginning to increase quickly, if we want to know the factors influencing, demographic study or effective factors which are effect on online shopping behavior of Indian consumers, several articles has been written on that technology. For this research 600 respondents were collected through questionnaire from the 6 district of west Bengal. Internet and non-Internet users are given their responses in this study. The primary data were collected through questionnaire & pilot survey and few secondary data were collected through different journals, magazines, websites and research reports etc. The Primary objective of the current study is to identify the factors which influences online shopping significantly in West Bengal. It has also made an attempt to get information about the scope of improvement in online shopping website.

The survey based average data is selected and analyzed. Finally Factor analysis used on data in order to identify the factors of study. This study will definitely explore diverse variables and their level of influence on the customers in 6 geographical area of West Bengal towards online shopping or e-shopping.

**Keywords:** Customer preferences, online market, Store shopping, influences, Theoretical products, security & services.

## Introduction

Nowadays, the Internet is widely used in our daily life. Internet brought many advantages to individuals' daily lives for their existence. The help of internet and social media medium, people can communicate to each other, learn everything through online, entertain via online, buy different products and get services quickly. Of course the some disadvantages of it that long been discussed; like virus threat, hack of personal information theft, spamming etc. now come to our main topic Online shopping .

It is the hot topic in the recent era. The Online Shopping or e-shopping is a part of e-commerce where the consumers buy their goods / foodstuffs / services directly from the merchants over internet in actual time without the help of mediator and their services. Theoretically it is more convenient to buy products online due to its flexible nature, but in our country means India there is a main problem of adaptation of any kind of technology. That's why the adoption rate of that technology is

significantly different from other nations because of the country's unique social and economic characteristics. In India there are various culture and extreme disparities of income level. Consumer Behavior is still a challenging subject for the marketers to actually understand the pattern of buying decisions and when it comes to e-shopping the situation is even worst. For this reason the adoption of online shopping considerably increased in the last decade, but still they purchase online products projected. It is true that, this adoption is not justified by the internet penetration growth in most countries, which again reveals the changeable nature of consumer activities in online market. So this is still a growth market where numbers of players/merchandise are less due to the doubtful nature of the business. A literature part/review in the next section helps us to ascertain about research work which has been done in this area.

An online shop, e-shop, virtual store evokes the physical similarity of buying products or getting services at a bricks-and-mortar retailer or in a shopping place. This process is called

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Business-to-Consumer (B2C). Some online companies such as Amazon, Flipkart, Snapdeal.com, jabong.com and Home Shop18 conducted by this type of online business, it's under electronic-commerce (e-commerce). There is a concept of Business to Business when a business buys something from another business it's called B2B.

Online shopping in Midnapore, West Bengal is fast becoming popular as there are no waiting in lines or in traffic, you can shop from the convenience of your home, easier to do comparison shopping, discounts and you can shop at ANY time without restrictions. The city has a booming economy and that reflects well in the shopping style of the Midnapore people. Apart from the regular shops and superior malls, it's fact that, today online shopping is growing stage in Midnapore district as popularity, convenience and product delivery services as much more faster than others district of West Bengal. More people are turning to online shopping for all their needs, because online shopping gives more facility to purchase product through COD and Debit/Credit card system. So now a day it's more secured than previous stages.

Midnapore online shopping is easy, convenient and less time-consuming. You will just have to choose your favorite product, call or email or just drop a note at the website that you have entered and the product will be delivered to you within a very short span of time. You will just need a Credit or Debit Card or net banking with requisite money, order online and have the product at your home. There are various products to buy, shop online in Midnapore. There is one place to shop online in Midnapore, west Bengal, India-Seasonsway.com it is a popular portal in India and others portals are also available to buy and sale the products through online.

**Source:** [http://seasonsway.com/west\\_bengal/midnapore/online\\_shopping\\_midnapore.php](http://seasonsway.com/west_bengal/midnapore/online_shopping_midnapore.php)

## **Background of the Study**

Many studies have highlighted the benefits that Internet shopping offers to customers which include ability to shop round the clock at anywhere, to search and browse products, to compare prices, and to make flexible electronic payments (Hoffman et al., 1995; Alba et al., 1997; Peterson et al., 1997; Strauss and Frost, 1999; Shim et al., 2001).

India's e-commerce market was worth about \$2.5 billion in 2009, it went up to \$6.3 billion in 2011 and to \$14 billion in 2012. About 75% of this is travel related (airline tickets, railway tickets, hotel bookings, online mobile recharge etc.). Online Retailing comprises about 12.5% (\$300 Million as of 2009).

As this article is about the Online Shopping in West Bengal: A Perceptual Study on Customers in Kolkata, West Bengal. Some prior researches done on the subject of Online Shopping will be discussed in this segment. A significant amount of research work has been done on Online Shopping. A large group of researchers has pointed out the possibilities of Online Shopping. Others pointed out on the drawbacks and at the same time they provided necessary suggestion to make Online Shopping more useful for the online consumers.

Rook and Fisher (1995) conducted a study that provides conceptual and empirical evidence that consumers' normative evaluations moderate the relationship between the buying impulsiveness traits and related buying behaviors. They defined buying impulsiveness as a consumer's tendency to buy spontaneously, unreflectively, immediately and kinetically.

Liu and Arnett (2000) mentioned that the success of the e-commerce site depends on several factors such as Information, service quality, system use, playfulness and system design quality.

Online shopping offers to consumers which include ability to shop round the clock at anywhere, to search and browse products, to compare prices, and to make flexible electronic payments (Bhattacharjee Sarathi Partha, et al., 2012;) investigates the relationship between globalization, ecommerce adoption or acceptance that lead to business performance and effectiveness. According to Ranganathan and Ganapathy (2002), several key dimensions to B2C websites are - Design functionality, Security, Privacy and Information quality.

Tinne (2010) conducted spontaneity buying has four characteristics; firstly it is unplanned purchase. Secondly is exposure to the stimulus, thirdly characteristics of impulse buying is the immediate nature of the behavior and lastly consumer experiences emotional and cognitive reactions.

There is a broad range of products and services marketed online (Kiang et al., 2011), yet none of the above classifications refers to marketing products through the internet.

Patna (2013), investigates the relationship between globalization, ecommerce adoption or acceptance that lead to business performance and effectiveness. Through privacy and security policies, developers are doing their best to put an end to this unethical practice. That will pay the way for its success.

Bashir et al. (2013). Predicted impact of cultural values and life styles on desire buying behavior and the results suggested that there is significant impact of cultural values and life styles on spontaneous buying behavior. They found that the gender role

is the only one variable of cultural values and life style of customers where significant difference exists between male and female customers while making. They also discussed that Impulse buying is influenced by time, location, personality, economic, and cultural factors.

Indrajit (2015) have analyzed a Demographic study of buying spontaneity on E-Shoppers: Preference Kolkata (West Bengal) from customer perception.

The on-line shopping market in India is in the introductory stage of its life cycle. There will be a huge growth in the market so this study is undertaken to investigate the present market scenario and explore the future directions of the on-line shopping market. The general objective of the study is to make an in-depth exploratory study of the on-line shopping and its future direction.

### Objectives of the study

- To identify the factors which influences online shopping significantly in West Bengal

### Research Methodology (Sampling Plan)

**Research type:** Empirical in nature.

**Population:** Customers who use internet across all demographic characteristics.

**Research design:** The study has been partly descriptive and partly analytical. The study is based on both primary and secondary data.

**Sampling method:** The researcher was interested in some parameters influencing consumers' pre adoption of e-

marketing. The questionnaire was distributed to both the users and non-users of online marketing. A total of 600 questionnaires were distributed among the consumer of Kolkata, Howrah, North 24 pgs, Hoogly, Nadia, Murshidabad district.

**Tools for data Collection:** Questionnaire based on 5 point Likert Scale and Questionnaire consists of 15 questions and it has been administered on the male and female of different sectors  
**Sampling Area:** The area around urban and semi urban area in 6 geographic area of west Bengal was the sampling area for this survey.

**Sampling Frame:** Customer List (s) of the selected Local Internet Service Providers.

**Sample Units:** Internet and non-internet users.

**Sample Size:** 600

**Data Collection:** The study was consisting of both primary and secondary data.

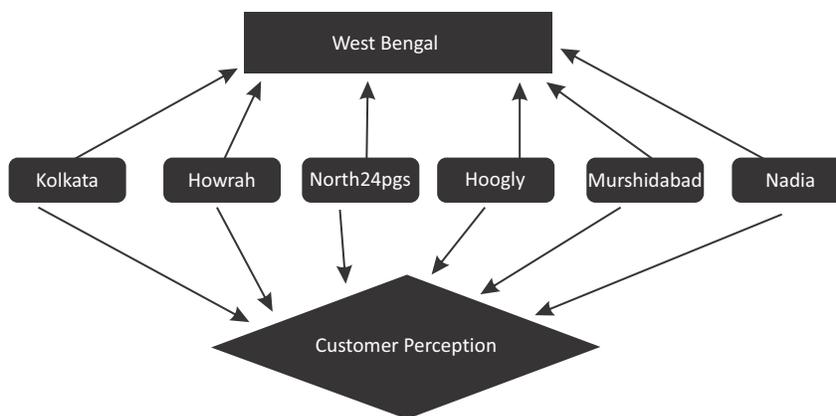
**Study period:** May-November, 2017

i) **Primary data Collection:** This data were collected through well-structured closed ended questionnaire.

ii) **Secondary data:** The data from secondary sources was collected through books, journals, reports, research studies, internet sources, magazines, newspapers, and bank websites to understand the basic concepts and literature pertaining to stress in general and occupational stress of bank

**Sampling:** Multistage sampling technique was used for this study. Based on 6 districts the subdivision has classified into 2 and each subdivision has 3 Ward divided into 3 Municipality. That's why 600 respondents have been collected for the sample size. The District is divided into 2 Stratum for each.

Conceptual Framework on data collection among 6 geographical area



## Data Analyses Methodology

The data collected from the survey will be subjected to data cleaning in order to identify missing value, sample characteristics and meet the assumptions of normality. After

this, the Descriptive statistics, Factor Analysis testing is used to find out the exact factor which influencing to the user to buy the product through online. The researcher will ensure that all items meet the acceptable limit level.

### Sample Design for objective 1

<b>Sample Size</b>	600
<b>Sample unit</b>	Online/ Non online users
<b>Sampling Frame</b>	Customer List (s) of the selected Local Internet Service Providers
<b>Test</b>	Factor Analysis through SPSS 19.0

### Reliability

#### Case Processing Summary

		N	%
Cases	Valid	600	100.0
	Excluded <sup>a</sup>	0	.0
	Total	600	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.813	.824	15

Given Cronbach's Alpha > 0.8, it indicates the data is reliable.

	ext_1 me	inf_o_1 avl	twf_r_1 d_1	pro_d_1 v_1	new_wb_1 _1	saf_sa_1 _1	esy_a_1 _1	right_1 _1	rsk_d_1 _1	mrch_1 _1	co_d_1 _1	mnb_1 _1	cybe_1 _1	cus_1 _1	shr_1 _1
ext_1 me	1.000	.197	.371	.124	.261	-.047	.334	.102	-.184	.234	.270	.307	.115	.247	
info_1 avl	.197	1.000	.168	.496	.001	-.182	.226	.255	.091	.321	.545	.159	.282	.689	
twfr_1 delv	.371	.168	1.000	.464	.333	-.334	.445	.304	.004	.443	.473	.285	.346	.302	
prod_1 _vrtm	.124	.496	.464	1.000	.392	-.188	.290	.206	.104	.104	.584	.270	.107	.430	
new_1 wbsit	.261	.001	.333	.392	1.000	-.244	.144	.024	.212	.089	.324	.262	.010	.101	
saf_1 s_ave	.047	.182	.334	.188	.244	1.000	.269	.343	.539	.180	.098	.221	.142	.078	
esy_1 _a_ess	.334	.226	.445	.290	.144	.269	1.000	.131	.378	.498	.181	.261	.273	.324	
right_1 _1	.102	.091	.304	.206	.024	.144	.131	1.000	.332	.227	.343	.024	.116	.203	
rsk_1 _d_1	-.184	.091	.004	.104	.212	.539	.378	.332	1.000	.227	.343	.024	.116	.203	
mrch_1 _1	.234	.321	.473	.584	.089	.221	.498	.227	.343	1.000	.261	.617	.438	.394	
co_d_1 _1	.270	.545	.473	.270	.324	.098	.181	.324	.024	.261	1.000	.356	.202	.435	
mnb_1 _1	.307	.159	.285	.107	.262	.221	.261	.262	.116	.617	.356	1.000	.214	.134	
cus_1 _1	.115	.689	.302	.430	.010	.142	.273	.010	.203	.438	.202	.214	1.000	.298	
shr_1 _1	.247	.689	.302	.430	.101	.078	.324	.101	.203	.394	.435	.134	.298	1.000	

	info_avl	prod_vrtn	saf_save	mrchndse_fgr	cod_fclt	cyber_crme	cust_pref
info_avl	1.000	.496	.182	.321	.545	.282	.689
prod_vrtn	.496	1.000	.188	.104	.584	.107	.430
saf_save	.182	.188	1.000	.539	.180	.221	.142
mrchndse_fgr	.321	.104	.539	1.000	.261	.617	.438
cod_fclt	.545	.584	.180	.261	1.000	.202	.435
cyber_crme	.282	.107	.221	.617	.202	1.000	.298
cust_pref	.689	.430	.142	.438	.435	.298	1.000

### RELIABILITY TEST AFTER VARIABLE DEDUCTIONS

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.785	.787	7

#### Inter-Item Correlation Matrix

	info_avl	prod_vrtn	saf_save	mrchndse_fgr	cod_fclt	cyber_crme	cust_pref
info_avl	1.000	.496	.182	.321	.545	.282	.689
prod_vrtn	.496	1.000	.188	.104	.584	.107	.430
saf_save	.182	.188	1.000	.539	.180	.221	.142
mrchndse_fgr	.321	.104	.539	1.000	.261	.617	.438
cod_fclt	.545	.584	.180	.261	1.000	.202	.435
cyber_crme	.282	.107	.221	.617	.202	1.000	.298
cust_pref	.689	.430	.142	.438	.435	.298	1.000

Validity Test: Cronbach's Alpha if Item deleted greater than 0.7 signifies the validity of the scale.

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
info_avl	25.87	9.622	.648	.566	.733
prod_vrtn	25.75	10.048	.480	.436	.763
saf_save	25.98	10.669	.337	.365	.790
mrchndse_fgr	25.97	9.977	.570	.632	.747
cod_fclt	25.80	9.262	.550	.442	.749
cyber_crme	25.89	10.316	.407	.411	.777
cust_pref	26.04	9.331	.609	.564	.737

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
info_avl	25.87	9.622	.648	.566	.733
prod_vrtn	25.75	10.048	.480	.436	.763
saf_save	25.98	10.669	.337	.365	.790
mrchndse_fgr	25.97	9.977	.570	.632	.747
cod_fclt	25.80	9.262	.550	.442	.749
cyber_crme	25.89	10.316	.407	.411	.777
cust_pref	26.04	9.331	.609	.564	.737

Internal Inconsistency test through Split half reliability test: Reliability coefficient =

### Correlation Matrix<sup>a</sup>

	info_avl	prod_vrtn	saf_save	mrchndse_fgr	cod_fclt	cyber_crme	cust_pref
Correlation	1.000	.496	.182	.321	.545	.282	.689
info_avl							
prod_vrtn	.496	1.000	.188	.104	.584	.107	.430
saf_save	.182	.188	1.000	.539	.180	.221	.142
mrchndse_fgr	.321	.104	.539	1.000	.261	.617	.438
cod_fclt	.545	.584	.180	.261	1.000	.202	.435
cyber_crme	.282	.107	.221	.617	.202	1.000	.298
cust_pref	.689	.430	.142	.438	.435	.298	1.000
Sig. (1-tailed)							
info_avl		.000	.000	.000	.000	.000	.000
prod_vrtn	.000		.000	.005	.000	.004	.000
saf_save	.000	.000		.000	.000	.000	.000
mrchndse_fgr	.000	.005	.000		.000	.000	.000
cod_fclt	.000	.000	.000	.000		.000	.000
cyber_crme	.000	.004	.000	.000	.000		.000
cust_pref	.000	.000	.000	.000	.000	.000	

a. Determinant = .067

Determinants > 0.001 so analysis is valid

### Reliability Statistics

Cronbach's Alpha	Part 1	Value	.650
		N of Items	4 <sup>a</sup>
	Part 2	Value	.509
		N of Items	3 <sup>b</sup>
	Total N of Items		7
Correlation Between Forms			.764
Spearman-Brown Coefficient	Equal Length		.866
	Unequal Length		.868
Guttman Split-Half Coefficient			.859

a. The items are: info\_avl, cyber\_crme, prod\_vrtn, mrchndse\_fgr.

b. The items are: cod\_fclt, saf\_save, cust\_pref.

## Factor Analysis

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.666
Bartlett's Test of Sphericity	Approx. Chi-Square	1610.981
	df	21
	Sig.	.000

>Significant and sample adequacy is greater than 0.6 is preferred test value

### Communalities

	Initial	Extraction
info_avl	1.000	.719
prod_vrtn	1.000	.661
saf_save	1.000	.461
mrchndse_fgr	1.000	.855
cod_fclt	1.000	.647
cyber_crme	1.000	.597
cust_pref	1.000	.635

Extraction Method: Principal Component Analysis.  
Proportion of each variable explained by the factor

**Pattern Matrix**

	Component	
	1	2
prod_vrtn	.849	
info_avl	.810	
cod_fclt	.809	
cust_pref	.707	
mrchndse_fgr		.913
cyber_crme		.767
saf_save		.685

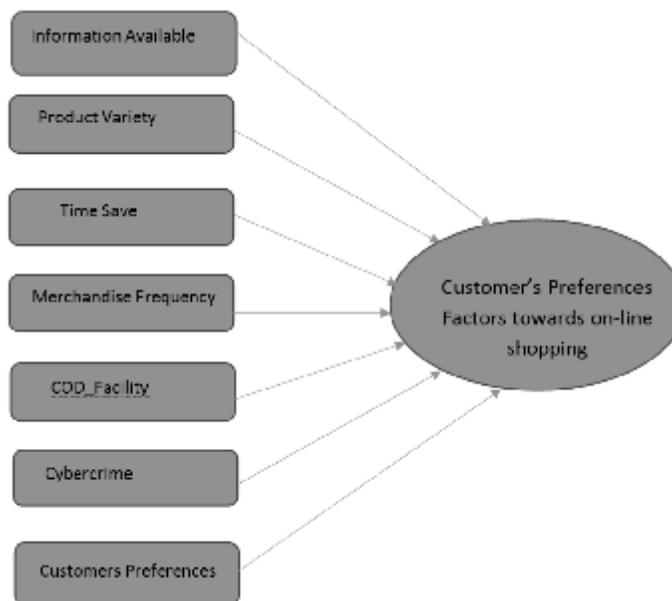
Extraction Method: Principal Component Analysis.  
 Rotation Method: Oblimin with Kaiser Normalization.  
 a. Rotation converged in 4 iterations.  
 Factor loading: highest explained by production variation to lowest loading by safety and save.

**Component Score Covariance Matrix**

Component	1	2	3
1	1.194	.649	2.146
2	.649	1.113	.751
3	2.146	.751	3.130

Extraction Method: Principal Component Analysis.  
 Rotation Method: Oblimin with Kaiser Normalization.  
 Component Scores.  
 Component score of covariance matrix > 0.6 signifies the appropriateness of 2 component factor analysis.

**From the above objective extracted 7 variables out of 15 which observed for influences to the customers to buy online product frequently....**



A Diagram of research model

## Explanation of 7 variables details

### 1) Information Availability:

Online or E-stores must describe products for sale with text, pictures, and multimedia files, whereas in a physical retail store, the actual product and packaging products will be available for direct inspection (which might involve a test drive, fitting, or other experimentation). Some online stores provide or link to supplemental product information, such as instructions, safety procedures, parades, or constructor specifications. Some provide background information, advice, or how-to guides designed to help consumers decide which product to buy. Some stores even allow customers to comment or rate their items. There are also dedicated appraisal sites that host user reviews for different products. Reviews and even some blogs give customers the option of shopping for cheaper purchases from all over the world without having to depend on local retailers. In a conventional retail store, clerks are generally available to answer questions. Few retail stores have real-time conversation features, but most rely on e-mails or phone calls to handle customer questions. Even if an online store is open 24 hours a day, seven days a week, the customer service team may only be available during regular business hours.

**2) Products Variety** is the variable for this research study. Quality and variety of the products that has been changed the life style of human being. You need to help a computer, Tab or Laptop or Mobiles for online marketing. Through a mouse click or finger touch user can see all the products from the portal where they can purchase or sale their product. As per their convenience they can purchases the product through online. So this factor is very influencing on the online consumer.

**3) Time Save** It takes less time in evaluating and selecting a product while shopping online (0.59). Online shopping takes less time to purchase (0.55). Online shopping doesn't waste time (0.57), this factor is named as "Time Saving". Now days this services reduces risk factor before one. There are three options to purchase e-products 1) COD system, 2) Credit card and 3) Debit card system. Its true when the consumer has to purchase e-products through online there were some risk but it's removed and reduces more before one. So they are basically believed on these services and buying without hesitation.

**4) Merchandise Service** is another variable which influences on the consumer to buy their product through online. Merchandise has to give the full protection on the product as well as full service for the consumer. Has to give the proper security for online transaction as well as online purchase the product because there is an option for Debit/Credit card purchase facility. For this, protection is most important factor.

Save it from the cybercrime. It's a responsibility which under the Merchandise Service.

### 5) COD\_Facility

**List of following companies they are giving COD facility to online users in India...**

<http://www.flipkart.com>  
<http://www.martever.com/>  
<http://www.homeshop18.com>  
<http://shopping.indiatimes.com/>  
<http://www.shoppersstop.com>  
<http://www.indiaplaza.com>  
<http://www.yebhi.com>  
<http://www.retailmart.com/>  
<http://www.gadgetworld.in/>  
<http://indiaemporium.com/>  
<http://www.infibeam.com/>  
<http://www.coolbuy.in/>  
<http://www.myntra.com>  
<http://www.jabong.com/>  
<http://www.utsavfashion.in>  
<http://www.buybooksindia.com>  
<http://www.myntra.com>  
<http://www.bestylish.com>

Things to keep in mind when buying items through Cash on Delivery

- Buyers can only avail of COD facility for those items that are available for purchase with COD as a payment option.
- No item priced above Rs. 50,000 will be available for purchase through Cash on Delivery.
- Buyer delivery address pin code needs to be part of List of Cash on Delivery supported pin codes.
- The courier company will contact the buyer so as to confirm the delivery date and time. The buyer should ensure being available at the time of delivery along with the transaction amount in cash.
- The buyer can't open the package before submitting the transaction amount to the courier agent.
- Octroi Charges, as may be applicable in various territories in India, shall be paid by the buyer to the Courier Agent. These additional charges will depend on the city pin code list as per government rules and regulations. The Logistics Agency will give you the Octroi receipt issued by the concerned Government agency.

**6) Cyber Crime** is another important variable. The element of risk in this context would relate to the security of transacting for consumers and determine the acceptability rate of this alternative delivery channel in the long run. To control the risk factor marketers has to provide consumer re-assurance and

information. Improve application as well as online payment information security and privacy, train & advise e-customers for following secure online transaction practices and other risk related factors. The pay-ment system still needs to be improved. The most challenging issue would be building the trust among the consumers about the online shops. The people know the positive sides of online shopping. But they do not know whether their privacy or security is there or not. Develop easy & user friendly cus-tomer support applications for flexibility.

**7) Customer Preferences** is important variable which extracted from out of 15 variables for online shopping behavior. From this variable we have to know which factors are influences to customers to buy their necessary products through online. It's very psychological problem and this study indicate to why they are going for this way. Actually this study is influences to the customers as well as portal owner (Like FlipKart, Amazon, Snap Deal and others) and based on the research given a conclusion which helps to the online companies to make a design for marketing and future scope plan.

### Conclusion and suggestions

These 7 variables (Production Variation+ Information Available+ COD facility +Customer Preference + Merchandise Figure+ Safety & Save+ Cyber Crime) are more effective to buy the product through online.

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# The Effects of Entrepreneurs Characteristics on Loan Repayment Behaviour of MSMEs

Dr. Mateen Ahmed Siddiqui\*

## Abstract

*Access to finance is an imperative feature in the business operations of MSMEs. MSMEs are heavily dependent on loans to carry out their businesses, cash flows and working capital needs. The feasible sources of finance for the MSMEs include commercial banks, non bank financial institutions and non-governmental organizations etc. The role of banks and other financial institutions is clear for MSMEs but lending to them remains a strenuous and discouraging activity as many factors influence the sustainability of these businesses and their loan repayment behavior. The central problem most banks and financial institutions face is poor loan repayment from MSMEs. The present paper studies the loan repayment behavior of MSME and its relationship with entrepreneur's characteristics. A descriptive analysis was done to permit the study to make use of both quantitative and qualitative data collection techniques and data analysis procedures. In all, 112 enterprises were chosen for the research. The results show that that firm repayment performance is significantly affected by entrepreneur characteristics of qualification and experience and does not has any effect from skillful training and gender of entrepreneur.*

**Key words:** Cash Flows, Working Capital, Loan Repayment.

## Introduction

MSMEs huge contribution to employment generation and the role they play in sustainable development prompted many countries around the world to come up with special programs and support organizations for the development and growth of this sector. MSMEs are becoming increasingly important for the formation and development of a contemporary, vibrant and knowledge-based economy. This is because of their capacity to promote entrepreneurial skills, and their ability to be swiftly adaptable to a changing market, and to generate new jobs. The relationship between entrepreneur characteristics and firm repayment performance has received a lot of focus in recent times. The factors which form the character and behaviour of the entrepreneur are crucial internal capacities that impact on firm repayment performance as the rate of MSMEs failure in developing countries as well as developed countries is alarming. A majority of new MSMEs fail within the first five years of their business operation. Every three out of five MSMEs fail within their first three years of operations. Thus finding out the borrowers characteristics and its impact on loan repayment performance is significant for Indian MSMEs.

## Objective of the study:

1. To examine the relationship between the MSMEs borrowers characteristics with their credit repayment behavior.

## Hypotheses of the study

The following hypotheses were formulated for the study

- H1 Loan repayment is dependent on experience of entrepreneur
- H2 Loan repayment is dependent on qualification of entrepreneur
- H3 Loan repayment is dependent on training of entrepreneur
- H4 Loan repayment is dependent on gender of entrepreneur

## Methodology

### Area of Study

In order to select the sample units the prime task before the researcher was to select the districts which should be

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representative of highly industrialized areas, moderately industrialized areas and also the under developed areas. With this objective the researcher has selected two districts of Telangana namely, Hyderabad and Rangareddy.

### Sample Selection

To conduct the study, 112 MSMEs were surveyed pertaining to eight different sectors namely food, chemical, pharmaceutical, engineering, service, plastic, printing and miscellaneous were selected.

### Collection of Data

Primary data for the study is collected from Micro Small and Medium enterprises by using a structured questionnaire.

### Data Analysis

The information gathered was tabulated and analyzed by using percentages and Chi square test.

### Review of Literature

Kristiansen, Furuholt & Wahid (2003) on small enterprises in Indonesia, a significant correlation was found between age of the entrepreneur and success of the MSMEs. The MSMEs that were operated by entrepreneurs who were twenty five years old and above were more successful than the younger ones. In respect of business management experience, the entrepreneur characteristics covered age, education, managerial competence and industry experience.

Kolvereid (1996) found that businesses that were run by entrepreneurs with prior entrepreneurial experience had higher survival chances and scored significantly higher success levels than those without such experience.

Charney & Libecap (2000) found that entrepreneurship education produces self-sufficient successful enterprising individuals. Furthermore, the study found that entrepreneurship education increases the likelihood of MSMEs success.

McMahon (2001) stated that experience on the part of the owner or manager had a significant contribution on success of small and medium size enterprises. The enterprise size also had a significant success effect success of MSMEs.

Fielden et al. (2000) in a study on micro and small business start-up in North-West England reported that skills and experience are very essential to enterprise continued existence while experience from preceding job, and on the job experience are key factors in enterprise duration, development and endurance.

Carlsson and Karlsson (1970) experienced that mature entrepreneurs have a propensity to be more risk hesitant than younger ones, thus negatively impacting on firm performance. Martin and Staines (2008) stated that managerial skills assist managers to solve issues that are directly relevant to the existing, fast changing business environment.

According to Khayesi(2009), the objective of training is to assist owners of SMEs develop their skills.

Sinha (1996) concluded that successful entrepreneurs were relatively younger in age compared to the older ones. The effect of educational background on enterprise success was relatively analysed and the study found that 72 percent of the successful entrepreneurs had a minimum level of technical qualification, whereas approximately 67 percent of the unsuccessful entrepreneurs did not have any technical educational qualification.

### Loan Repayment Performance of the selected micro small and medium enterprises (MSMEs)

The repayment performance of select MSMEs is shown in Table 1 and Graph 1. It is observed that 73 per cent of the enterprises are paying both principal and interest to banks and financial institutions, while 8 per cent have fully repaid the loan amount. The enterprises who on account of their poor performance paid only interest are 15 per cent and 4 per cent of enterprises have defaulted.

<b>Table 1 Repayment position of Small and Medium enterprises</b>		
Repayment performance	Number of units	Percentage of enterprises
Fully repaid	9	8.04
Payment of interest only	17	15.18
Payment of principal and interest	82	73.21
Defaulted	4	3.57
Total	112	100.00
<i>Source: Primary data</i>		

**Graph No. 1 Repayment performance of SMEs**



In order to analyze in a better manner, the repayment factors are divided into three namely borrower, firm and lender characteristics. The studies show that when a loan is not repaid, it may be a result of the borrowers unwillingness or inability to repay. Similarly collateral requirements and sufficiency of loan amount also are important factors that have significance over the repayment behaviour.

**Classification on the basis of entrepreneur behaviour affecting repayment performance**  
**Training attended by entrepreneur**

It is seen from Table 2 that, 100 per cent of the entrepreneurs who have undergone training are repaying promptly to the

at 5 per cent significant level with 3 degree of freedom and 'P' value were calculated. As the calculated value of  $\chi^2$  5.381 is less than the table value of 7.81 and the 'P' value 0.146 is more than 0.05, it can be concluded that there is no significant association between training undertaken by entrepreneur and repayment performance.

Hence the null hypothesis that loan repayment is not dependent on training of entrepreneur is accepted and it is concluded that borrowers without any adequate training will also repay loan to financial institutions and hence there is no relation between training attended by borrower and loan repayment performance of the enterprises.

Training	Fully repaid	Payment of interest only	Repayment of interest and principal	Defaulted	Total
Yes	0 (0)	0 (0)	13 (100)	0 (0)	13 (100)
No	9 (9)	17 (17)	69 (70)	4 (4)	99 (100)

*Source: Primary data, Note: Figures in the parenthesis are percentage to total*

Pearson chi-square value  $\chi^2$  5.381, df=3, p value = 0.146

banks and financial institutions with no defaulters. Among the entrepreneurs who are not trained 70 per cent have repaid interest and principal, 17 per cent repaid only interest and 9 per cent being fully repaid the loan. 4 per cent entrepreneurs are defaulters from this segment. This shows that the entrepreneurs who have undergone training are able to repay better than compared to those who have not under taken any training program. The study of Godquin (2004) supports the study as it was suggested that training undergone by the entrepreneur has a positive impact on repayment performance and the borrowers that did not have any training in relation to their business have a higher probability to default.

Ho: Loan repayment is not dependent on training of entrepreneur  
 Ha: Loan repayment is dependent on training of entrepreneur

In order to access the association between training undergone by the entrepreneur and repayment performance the  $\chi^2$  value

**Gender of entrepreneur**

The different studies show casts that female entrepreneurs are better managed than their male counterparts, it is viewed that female entrepreneurs have not defaulted, but owing to their performance only 59 per cent of them are repaying interest and principal, 33 per cent are paying only interest and 8 per cent have fully repaid to the banks and financial institutions. Against to this male entrepreneurs happen to be 75 per cent who have repaid principal and interest and 13 percent of them are paying only interest. The fully repaid being 8 per cent and 4 per cent of them have also defaulted to the banks and financial institutions. The study of Chong Fennee (2010), validate this study that there is significant gap between gender in terms of credit management, wherein the females borrowers tend to be more particular about repayment and did not defaulted.

Gender	Fully repaid	Payment of interest only	Repayment of interest and principal	Defaulted	Total
Male	8 (8)	13 (13)	75 (75)	4 (4)	100 (100)
Female	1 (8)	4 (33)	7 (59)	0 (0)	12 (100)

*Source: Primary data, Note: Figures in the parenthesis are percentage to total*

*Pearson chi-square value  $\chi^2$  3.806, df=3, p value = 0.283*

Ho: Loan repayment is not dependent on gender of entrepreneur

Ha: Loan repayment is dependent on gender of entrepreneur

Table 3 show casts the association between gender of entrepreneur and repayment performance the  $\chi^2$  value at 5 per cent significant level with 3 degree of freedom and 'P' value were calculated. As the calculated value of  $\chi^2$  3.806 is less than the table value of 7.81 and the 'P' value 0.283 is more than 0.05, it can be concluded that there is no significant association between gender of entrepreneur and repayment performance of enterprise.

Hence the null hypothesis that loan repayment is not dependent on gender of entrepreneur is accepted and it is

Ho: Loan repayment is not dependent on experience of entrepreneur

Ha: Loan repayment is dependent on experience of entrepreneur

Table 4 shows the association between experience of entrepreneur and repayment performance the  $\chi^2$  value at 5 per cent significant level with 9 degree of freedom and 'P' value were calculated. As the calculated value of  $\chi^2$  33.194 is more than the table value of 16.9 and the 'P' value 0.000 is less than 0.05, it can be concluded that there is significant association between experience of entrepreneur and repayment performance. It could be concluded from the study that as older the enterprise, its repayment performance will improve significantly.

Experience of the entrepreneur	Fully repaid	Payment of interest only	Repayment of interest and principal	Defaulted	Total
Less than 5 yrs	0 (0)	6 (50)	5 (42)	1 (8)	12 (100)
6-10 yrs	0 (0)	4 (15)	20 (74)	3 (11)	27 (100)
11-15 yrs	4 (26)	3 (20)	8 (54)	0 (0)	15 (100)
Above 15 yrs	5 (9)	4 (7)	49 (84)	0 (0)	58 (100)

*Source: Primary data, Note: Figures in the parenthesis are percentage to total*

*Pearson chi-square value  $\chi^2$  33.194, df=9, p value = 0.000*

concluded that both male and female borrowers are repaying the loan hence there is no relation between genders of entrepreneur on loan repayment performance of the enterprises.

### **Experience of entrepreneur**

It is seen that the more experienced entrepreneur the higher percentage of repayment is done to the banks and financial institutions and defaulters are entrepreneurs who are less experienced. All the defaulters are the entrepreneurs who have experience of less than 10 years. The entrepreneurs having more than 15 years of experience have performed best with no defaults and 84 per cent of them repaying interest and principal as shown in Table 4.

Hence the null hypothesis that loan repayment is not dependent on entrepreneurs experience is rejected and it is concluded that experience of borrowers has significant impact on repayment performance of loan to financial institutions and hence there is relation between experience of entrepreneur and loan repayment performance of the enterprises.

### **Qualification of entrepreneur**

Table 5 states that among the entrepreneurs, one having qualification up to SSC only has defaulted to the banks and financial institutions. As the qualification increases the percentage of repayment of entrepreneurs in terms of principal and interest and full repayment enhances.

Qualification of the entrepreneur	Fully repaid	Payment of interest only	Repayment of interest and principal	Defaulted	Total
Up to SSC	1 (9)	3 (27)	3 (27)	4 (37)	11 (100)
Inter / ITI	1 (7)	4 (29)	9 (64)	0 (0)	14 (100)
Graduation	2 (4)	6 (13)	37 (83)	0 (0)	45 (100)
P.G	5 (13)	4 (10)	30 (77)	0 (0)	39 (100)
Any other	0 (0)	0 (0)	3 (100)	0 (0)	3 (100)

*Source: Primary data, Note: Figures in the parenthesis are percentage to total*

Pearson chi-square value  $\chi^2$  46.914,  $df=12$ ,  $p$  value = 0.000

Ho: Loan repayment is not dependent on qualification of entrepreneur

Ha: Loan repayment is dependent on qualification of entrepreneur

Table 5 shows the association between qualification of entrepreneur and repayment performance the  $\chi^2$  value at 5 per cent significant level with 12 degree of freedom and 'P' value were calculated. As the calculated value of  $\chi^2$  46.194 is more than the table value of 21.0 and the 'P' value 0.000 is less than 0.05, it can be concluded that there is significant association between qualification of entrepreneur and repayment performance. It could be concluded that educated and qualified entrepreneurs and managers will pay considerable attention towards repayment to the banks and financial institutions.

Hence the null hypothesis that loan repayment is not dependent on qualification of entrepreneur is rejected and it is concluded that borrowers who are educated and qualified will repay to banks and financial institutions and hence there is relation between qualification of borrowers and loan repayment performance of the enterprises.

This study corroborates with the findings of kiggundu (2002) that lack of entrepreneurial competencies, lack of ability and skills of co-founders Longenecker (1999), lack of proper education of the entrepreneur Beaver (2005) will have a negative impact on the repayment performance of enterprise. Whereas, proper education level of the borrower has a positive impact on repayment performance, Martin (1997).

## Conclusion

The borrower's characteristics and its relationship towards repayment performance and its determinants were discussed in this study. It is concluded that firm repayment performance is

significantly affected by entrepreneur characteristics of qualification and experience and does not has any effect from skillful training and gender of entrepreneur. Firms run by relatively young, well-experienced and skillful entrepreneur's record better performance. It is essential, therefore, that MSMEs asses and match their planned decision with traits of owners and managers to enhance their competitiveness and performance. The implications of this study are that specific policy measures are necessary to encourage the many well trained but unemployed young people to engage in businesses. Additionally it also implies that specific training programs are necessary to equip the practitioners with necessary theoretical and practical capacities to enhance performance of their firms.

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# A Study on Falling Female Employment during High Growth Period in Indian Economy

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## Abstract

Currently, female labour force participation rate is lowest since independence in India. What explains the decline of the already low female labour force participation rate, particularly during a period of rapid economic growth? Women's economic participation is influenced by interrelated factors, each important unto itself. Increased attendance in educational institutions, declining child labour, higher household income levels, structural shift away from agricultural employment, and increased mechanisation of agriculture were some of the factors found to be driving female employment trends. Additionally, it was found that in rural areas the decline in animal husbandry, and in urban areas a fall in international demand for products of labour-intensive industries, have also contributed to the decline as women were the main employees in these sectors. Policy must create an enabling environment for women's economic participation in India. India is in an advantageous position globally, given its demographic dividend and positive investment climate. Appropriate macroeconomic and social policies are needed to realise the full economic potential of women, which can then harness the demographic dividend, empower women, raise economic growth rate and at the same time ensure a more inclusive growth process.

**Key Words:** Employment, Labour, Female, India, Issues, Agriculture, Industry, Service

## Introduction

The sharp decline in the already low rate of female labour force participation rate (LFPR) in India since the mid 2000's, particularly when the economy was experiencing unprecedented economic growth, has raised concerns among policymakers and academicians alike. Cross-country evidence suggests that female labour force participation is high in low-income countries as well as in upper-middle and high-income economies, but relatively low in lower-middle-income countries, creating a U-shaped relationship between national income and female labour force participation (Psacharopoulos and Tzannatos 1989; Schultz 1990, 1991; Pampel and Tanaka 1986; Kottis 1990), which consistently appears in multi-country studies from the 1950's and 1960's through the 1990s (Sinha 1967; Durand 1975; Goldin 1995; Mammen and Paxson 2000; Juhn and Ureta 2003). As women move out from agriculture or low productivity work, it falls, bottoms out and then moves upwards in the U when they acquire education and return to the labour force at more advanced stages of development to participate in remunerative non-agricultural jobs. The gendered structure of labour markets also contributes to this U (Durand 1975). Several researchers have attributed this relationship to changes in labour market structure

(Sinha 1967; Durand 1975; Juhn and Ureta 2003), social norms regarding the nature of women's work (Goldin 1995), and cultural factors such as religion, social mobility, and family structure (Youssef 1974; Semyonow 1980; Horton 1996).

The Indian scenario possibly resembles the same U-pattern with female LFPR/work participation rate (WPR) with female LFPR declining over the period of high economic growth probably to reach its minimum. The real question now is: If India is at the bottom of the trough of the U-shaped curve, when will India turn the corner, that is, when will the female LFPR start to rise, and what policy intervention is needed for this rise to happen?

A rise in women's participation in economic activities is important for instrumental reasons at a macroeconomic level: the realisation of their full economic potential will, first, boost the growth rate, and second, make it more inclusive. The Organisation for Economic Co-operation and Development's (OECD) calculations show that in India raising the participation of women in the labour market with a package of pro-growth and pro-women policies can boost the growth rate by about 2 percentage points over time (OECD 2015). Female employment is crucial not just because it has a positive effect on

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their own quality of life, but it also significantly improves the living standard of the entire household (Subbarao and Raney 1993; Drèze and Sen 1989). Therefore, policies to promote growth of female intensive and women “friendly” sectors or improving the skill level of the women or improving technologies that would help women participate in other sectors are warranted to improve women’s economic participation, for which we need to know the intrinsic reasons behind the low and declining female LFPR.

The objective of the paper is to explain the reasons behind the low level of female LFPR (the structural factors), in comparison with other countries at similar levels of income, as well as its steepfall (trend) in India despite high gross domestic product (GDP) growth, based upon the national employment and unemployment surveys (EUS) conducted by the National Sample Survey Office (NSSO).

### **Female Work Participation in India and World**

Between the early 1990s and 2007, world employment grew by around 30%. Though there had been improvements over the period, nevertheless, globally the labour force-to-population ratio for women remained consistently low. For males, it was 77.1% but for females it was 51.1% in 2012 (ILO 2013). In South Asia, the female LFPR fell from 36.1% in 1992 to 35.8% in 2002, and then declined sharply in the next decade to reach 31.8% in 2012. This trend was driven by the largest country in the region, India. In other regions, the female LFPR was much higher: 52.8% in developed economies and European Union (EU), 50.2% in Central and South-eastern Europe (non EU) and Commonwealth of Independent States (CIS), and 66.4% in East Asia in 2012.

The female LFPR in South Asia is the lowest for any region in the world (and exceeds only the rates for the Middle East and North Africa, where income levels may be higher but cultural barriers to women’s labour force participation are very important). Also, the corresponding male LFPR in South Asia had been 84.8% in 1992, 83.3% in 2002 and 81.3% in 2012; the gender gap was 49.5 percentage points in 2012. What is worrying is that the gender gap in LFPR in South Asia had increased in the last decade, unlike all other regions where the gap has reduced. This has to be seen in the context that open unemployment is low in South Asia (4.5%) but vulnerable employment (defined as own account workers plus unpaid family workers) is extremely high (at 76% in 2012) among women (ILO 2014). There are wide differences in female LFPR across different countries in South Asia, with Nepal, Bhutan, and Bangladesh having high female employment-to-population ratios. Nepal and Bhutan are primarily agrarian economies, located in the mountains where there is lower potential for non-agricultural work, and hence

they are characterised by high male migration, particularly to neighbouring India. Women must work in agriculture to sustain food output for survival. Bangladesh is also an agrarian low-income economy, with the additional feature that it has specific industries like garments and textiles, where female employment is high. What is not able is that female employment-to-population ratio declines only in India, in all other countries it is either constant or increasing.

### **Nature and Trends of Female Employment**

**National trends:** Women comprise nearly half of the population in India, but when it comes to participation in the labour market, under a quarter of women do: their LFPR is only 22.5%, as per the EUS conducted by the NSSO. As per its latest estimates, in 2011–12, it is only 25.3% in rural and 15.5% in urban areas. In India, there has been a consistent decline in female LFPR both in rural and urban areas since the 1970’s. However, in this paper we focus primarily on the decline post 2004–05, when the GDP growth rate increased significantly above the growth rate attained in India ever since the economic reforms that began in 1991. Post 2005, the decline in LFPR is more pronounced, when female employment started declining even in absolute terms, particularly for rural women. During 2005–12, rural female employment declined by 23 million (taking usual principal and subsidiary status together), of 4 percentage points in the LFPR of such women. This clearly reinforces the point that rural distress was probably compelling these women to join. The aged female workforce, shockingly, increased from 7.26 million in 2005 to 7.32 million in 2010 to 7.36 million in 2012, the reasons for which will become primarily attributable to a fall in agricultural employment in absolute numbers (by 28 million). Total female employment in urban India declined during 2005–10 (24.5 to 22.8 million). Though it increased by 4.5 million during 2010–12, the female work participation rate witnessed a decline even during this period.

**Rural trends:** Data shows that the only increase in the female LFPR since 1977 occurred over 1999–2000 to 2004–05, which deserves an explanation. In the 60 million increase in total jobs (male and female) during 2000–05, 14.6 million was attributable to a rise in rural female unpaid family workers in the agricultural sector which was certainly a retrogressive development, both for the autonomy of women and for an economy undergoing structural transformation (Mehrotra et al 2014). They joined the labour force because farming households were in distress when agricultural growth had dropped below 2% per annum over 1996 and 2004. Post 2005, it was these family helpers contributing to the family farm who moved out (16.1 million). They basically worked as a reserve army of labour who joined the rural labour force during

1999–2000 to 2004–05, at a time of agricultural distress, when the agricultural growth rate was very low (about 1.7% per annum), compared to the 3.2% per annum since the mid-2000s. Working on the family farm for women is actually part of their double burden and cannot be perceived as a source of either independent income or working outside the home, which are the real sources of empowerment. Mehrotra et al (2014) show that another retrogressive development occurred during this period (2005–10): not only women in usual working age (15–59 years) joined the agricultural labour force, but 1.65 million women who were over 60 years joined the rural agricultural workforce leading to an increase of 4 percentage points in the LFPR of such women. This clearly reinforces the point that rural distress was probably compelling these women to join. The aged female workforce, shockingly, increased from 7.26 million in 2005 to 7.32 million in 2010 to 7.36 million in 2012. After 2005, with various public initiatives like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which started in 2006, as well as the all-weather rural roads programme to connect unconnected areas in rural India, apart from the national rural housing scheme gearing up, waged work in the construction sector in rural India increased. The huge increase in rural female employment in construction (which dominates employment in non-manufacturing industry) shows up in the share of female workforce in this sector rising from 1.8% in 2005 to 5.6% in 2010 in rural areas. The increase in the latter half of the decade is primarily led by construction. The share of manufacturing employment fell from 8.5% to 7.6% during the same period. Though the share of service sector employment increased, it declined marginally in absolute terms. Post 2010, rural female manufacturing employment somewhat increased, but the quality of employment remains a major concern. The majority of them have joined as self-employed (75% in 2012); self-employment for women increased from 5.7 million in 2009–10 to 7.7 million in 2011–12 (Mehrotra and Sinha forthcoming). But these are petty home-based activities as manufacturing employment primarily increased for those operating from their own dwelling (70% in 2012). In 2011–12, the unpaid family workers in manufacturing accounted for 25% of total rural manufacturing employment (2.5 million workers).

**Urban trends:** What is notable is that the female LFPR in urban areas is half compared to their rural counterparts. This is a reflection of the fact that household incomes are higher in urban areas, and poverty levels lower. The majority of urban women work in the services sector, mainly in education (25%), retail trade (16%), domestic work (15%) and other service activities like hairdressing, laundry, etc (10%). In fact, the share of services in total urban female employment increased from 50% in 2005 to 55% in 2012. However, manufacturing is not

unimportant as an employer for women in urban areas. The relatively poorly educated women in urban areas are mostly self-employed, as own-account workers and unpaid family helpers. Here, women are engaged mainly in manufacturing of wearing apparel (32%) followed by textiles (27%) and tobacco products (14%). However, regular work is available for more educated women, and as data shows, that has grown remarkably between 2000 and 2012, with women with regular work nearly doubling in number over that period. This is also a reflection of the growing level of education and opportunities thereof among urban women. Building on the national-level data analysis, the next section attempts to understand the underlying reasons behind the existing low and falling rate of female labour force participation.

### **Reasons for Low and Declining Female Participation**

Economic growth enhances employment opportunities but it cannot on its own reduce gendered inequalities. Differences in time-use at home between men and women, differences in education and skill level, social and cultural restrictions, sectoral and occupational segregation, and male migration, access to productive inputs, all lead to inequalities in decent work participation. The low and further declining female LFPR in India is a combination of various factors.

**Education of over-15-year olds:** There was a significant increase in enrolment in India, higher for girls both in the age group below 15 years, as well as 15–19 years, after 2005. Since 15 years is the legal age for working, their participation in school had a dramatic impact on female LFPR. Data shows that 15–24-year-old girls in education rose more than twofold, from 17.6 million to 40 million over a 12-year period. There was a similar increase for 20–24-year-old youth from 14.9% for boys and 7.6% for girls in 2004–05 to 22.5% and 12.8% in 2009–10 (Planning Commission 2012). This dramatic change reflects a silent revolution that has swept across India. It is driven by the fact that enrolment in secondary schooling increased sharply for girls, as enrolment rates for girls had risen at elementary school level. In fact, there is complete gender parity in female and male enrolment at secondary enrolment (by 2014–15, according to District Information System for Education or DISE data), which is rare in developing countries. State governments across the country have been incentivising girls to remain in school when they finish the compulsory eight years of schooling (in accordance with the Right of Children to Free and Compulsory Education Act, 2009), by giving them bicycles to travel to the nearest secondary school. This is for the state a more cost-effective option than opening more and more secondary schools in rural areas. With the very significant

increase in the density of good rural roads, the bicycle option has opened up new opportunities never available hitherto for girls across India. Demand for schooling for both boys and girls has also risen with rising per capita incomes, as India experienced the fastest GDP growth ever in its history (8.4% per annum between 2003–04 and 2011–12). For the first time in India since 2004–05, the absolute number of poor fell. Earlier, the incidence of poverty had been falling, but between 2004–05 and 2011–12 the absolute number of poor fell by 138 million, an achievement of staggering proportions. One factor driving female LFPR down the U-shape across countries as per capita incomes rise, is increasing enrolment of girls in schools. In other words, there is a U-shaped relationship of female participation with education and household income. The marginal effect of education on LFPR, as estimated by Klasen and Pieters (2013) for urban India for 1987 and 2009, points to another dimension. It shows that the marriage market returns to education are lower in 2009 than in 1987, with essentially flat returns up to middle school and then high returns to secondary and graduate education. Thus in 2009, marriage prospects for a woman are better with higher education level than what was in 1987. Now it is at least secondary education as compared to primary or middle school in 1989, thus underlining the importance of growing school enrolment in the decline in female LFPR in urban India during 1987 to 2009 in an indirect way.

**Declining child labour:** An important reason for female LFPR falling is that child labour (that is, among girls in the age group 6–14 years) is falling. The number of male and female child labourers fell consistently from 10.6 million in 1999–2000 to 3.7 million in 2011–12, wherein the share of girls also declined. This is consistent with the fact that participation in education is increasing, not just for boys, but especially for girls. That there was a dramatic fall in the absolute number of child labourers is in itself quite impressive. And taken together with the fact that over this period the total child population was increasing, the achievement is particularly notable. This was possibly on account of significant government programmes focused on expansion of school access. The net enrolment rate at primary level had risen to 97% by 2007, and there was complete gender parity at primary level enrolment. By 2012, upper primary level (grades 6–8) gross enrolment rate had also risen to 84%.

**Changing domestic responsibilities:** The decline in LFPR among women is the highest in the age cohort 30–34 years followed by 35–39 years, thus indicating some reasons other than expansion of women's education to explain women's withdrawal (Sinha 2014). Domestic duties and care work, and

the ideology of the marital household govern the entry to, and withdrawal of women from the labour force to a large extent. Particularly in rural areas the share of rural women engaged in domestic duties increased from 51.8% in 2005 to 59.7% in 2012, thus signifying increased burden of household activities, care work, economic activities for household consumption and non-System of National Accounts (SNA)/non-economic work. As older girls entered and remained in secondary school, the task of younger sibling care performed by the older girls hitherto now had to be performed by these adult women. For rural females of aged 15 years and above engaged in domestic duties, the primary reason to carry out such activities and not participate in the labour market is the absence of any other household member to help them in household chores, child-care and other domestic duties. The role of direct social and religious constraints on women's work participation are lessening, reflecting the fact that society is evolving, but the social and household dynamics which regulate the gender division of labour is a source of pressure on women which is increasing their unpaid work. With greater nuclearisation of families, there is growing lack of support from other family members; thus women are constrained from joining the labour force even if they have the necessary qualification. And India's gender chore gap, the difference between the amount of housework done by women and men, is the largest of any country for which data is available (Hausmann et al 2012), indicating the huge burden of unpaid work solely on women in India. OECD (2012) estimates reveal that in India, women spend 351.9 minutes per day on unpaid work while men spend only 51.8 minutes. In contrast, in Norway (men: 210 minutes/women: 180 minutes), Denmark (242/186 minutes), United States (248/161 minutes), Belgium (245/151 minutes), and Finland (232/159 minutes), the average minutes per day spent by women are much less and that of men are much more. The women, not counted in the labour force, nevertheless, carry out specified activities like maintenance of kitchen garden, orchards, work on household poultry, dairy, processing of primary products, collecting firewood, cattle feed, preparing cow-dung cakes for fuel, getting water from outside, and sewing and tailoring. The system is such that working women have to wedge their work in with the responsibilities at home for domestic duties and extended SNA activities. The total fertility rate (TFR) in rural India has declined significantly in the past two or three decades, falling from 3.7 in 1993–94 to 3.1 in 2000 to 2.6 in 2011–2012, which eventually would tend to be supportive to increase female participation in the labour market. And therefore, there would be a fall in the unpaid workers. But the decline would be for a different set of females. It is not really the adult women, but the young girls, who are entering education at present

who would be joining the labour force in the near future. The gross enrolment ratio (GER) for girls has increased at both the secondary and higher secondary level. A 17% increase in GER at secondary level in five years (from 62% in 2010 to 79% in 2015) is a phenomenal achievement and explains majorly the decline in the number of unpaid workers as well as the female workforce. According to the Census 2011, the fertility rate is declining faster for Muslims along with improvement in sex ratio. Complementing it, the rise in the percentage of girls' participation at secondary and higher secondary level, across all communities (Scheduled Castes, Scheduled Tribes, Other Backward Classes, and Muslims), would be contributing to the labour force in the coming five to 10 years.

**Increase in household income:** Female work participation in the Indian context is clearly seen as responsive to economic stimuli, better described as the "income effect." With the rise of commercial agriculture and of household income (and fall in poverty rate), the opportunity cost of domestic activities for women increases while that of paid labour of women decreases. Hence, they tend to withdraw from the labour force. One source of rising rural household income increase has been the consistent rise in government's minimum support price (MSP) (for grains procured by the government for the public distribution system) after 2000. Rural wages had been stagnating over 1999–2000 to 2004–05. However, after that they began to rise. The rise in household income has been partly driven by the availability of public works employment where women and men had been offered equal wages. Half of all workers in MGNREGA work are women and many non-workers have also joined. However, there is a caveat. Although MGNREGA work would have increased women's labour force participation slightly, there was never more than 25 person days in a year that women worked in any year. But it has certainly led to a rise in women's wages and, therefore, has contributed to enhanced household income, especially in rural areas. But it is the broader effect of MGNREGA wages and rising MSP for grain that contributed to the rise in real wages post-2005. The second half of the 2000s saw a remarkable and historic shift in rural wages. Rural wages began to rise since 2006–07, partly due to the spillover effect of MGNREGA on the open market rural wage rate, and the rising demand for low-skilled labour due to the construction boom in general, on the one hand, and of labour, partly due to higher participation in education (Thomas 2012), male migration to urban construction sites; (Mehrotra et al 2014), and male participation in MGNREGA work, all of which then again led the farmers to start using machines. Rural women who were mostly in agriculture withdrew from the labour force given the rise in household income and availability of MGNREGA work in

the villages. The combined effect of this rise in non-agricultural employment along with the secular increase in wage rates (rural and urban), was that the incidence of poverty fell sharply after 2004–05 and the absolute numbers of the poor fell in India (Mehrotra et al 2014). The rise in income at the bottom of the income distribution played a major role in female withdrawal from the labour force in two ways. One is the lessening of financial necessity and the other, which is very significant in the Indian context, that women staying at home are often considered to reflect a rise in a family's social status.

**Mechanisation in agriculture:** Shortage of labour in the agricultural sector (as males moved out for higher wage construction work), rise in household income and technological change together led to mechanisation in this sector. Women perform more manual work than men in agriculture, with 54% of women performing manual activities (weeding, harvesting, etc) in cultivation in the agricultural sector as against 48% of men in 2011–12. The process of mechanisation reduces the demand for labour, affecting the female workforce. Now there is an increasing use of seed drills, fertiliser drills for sowing and planting, power weeders for weeding, harvesters and threshers, which were occupations traditionally done by women. These technologies are affordable, often manufactured by locals, and therefore, their use has become widespread. Men largely appropriate the control and use of technology. Farm mechanisation, therefore, results in segregation with men performing tasks involving the use of technology, replacing a number of activities earlier performed by women, particularly displacing the labour of women in subsistence and marginal households (Mallaiah 2009).

**Decline in household-level animal farming:** Traditionally in Indian agriculture, the activities allied to agriculture have been carried out by women: raising cattle, buffaloes, goats, sheep; production of milk and other dairy products; raising of poultry; production of eggs and operation of poultry hatcheries and other animal farming were activities done mainly by the women in the family. The number of rural women engaged in these activities declined absolutely by half, from 16.5 million to 8.9 million in seven years. With a decline in common property resources (that results in reduction in grazing land) and growing commercialisation in these sectors, it has become difficult for rural women in small and marginal farmer households to sustain these activities. However, it is perfectly possible that employment in dairying activities may increase in rural areas, as dairy production has grown, as manifested in the fact that India has become the world's largest producer of milk. The problem is that much of this milk production is likely to be conducted by medium and large farmers, as well as large

dairy farmers. Wage employment in such activities may grow in the future, though it may not necessarily for women in rural areas.

**Fall in Demand for Labour-intensive Products:** After the global economic crisis began in 2008, both output and employment in India was adversely impacted, in both tradable and non-tradable goods sector. Export growth of manufactured commodities slowed in 2008–09 and then turned negative in 2009–10. Exports of textile and textile products, particularly yarn, fabrics, made-ups (both cotton and silk), ready-made garments, leather products, gems and jewellery, handicrafts registered negative growth during 2008–09 and 2009–10 (RBI 2014). Agro-products like cashew, oil meals, processed food experienced a negative export growth. Sectors producing such commodities have a concentration of female workers. Fall in demand for such products have an impact on the workforce, particularly the informal contract workers, piece-rated wage workers and unpaid family workers, who are largely women. Also, as in any crisis, women faced increased competition from men for scarce jobs. About 27.9% of women workers is estimated to have lost jobs of the total women workers in 2003–04, as a result of the crisis through the channel of trade contraction (Kucera et al 2012).

**Structural factors:** Further, there are some structural factors contributing to low female LFPR. A study by Lahoti and Swaminathan (2013) observes that the composition of growth had been a crucial factor in determining the type of female employment in India. Here it is mainly the service sector that drove the economic growth and this sector requires high skill that a majority of women do not possess. Moreover, in general, in the Indian context there are several structural factors that remain barriers to women's greater economic participation. Informal piece rated nature of work, hoe-based work, which is high among women hardly leaves no scope for bargaining, transparency, social security benefits or even job security. Though female entrepreneurship has been rising in both manufacturing and services over the past decade, it is lower than its stage of development would suggest and most of these entrepreneurs work in the subsistence sector as street vendors or in other marginal activities for lack of wage employment (Ghani et al 2012). Finally, women face various types of challenges in the work-place, taking different forms, patriarchal hierarchy (as the bosses are mainly male), sexual harassment, lack of infra-structure at workplace (absence of female toilet) rendering them vulnerable to harassment. Such vulnerability often acts as a demotivating factor for them. We would, however, note that all these structural factors that we have cited in this sub-section have always existed,

and cannot be used to explain the fall in female LFPR; all it can do is tell us why female LFPR is low.

**Measurement Issues:** Kapsos et al (2014) show that measurement imprecision appears to have played a role in changes in female participation estimates, accounting for 4.1 percentage points of the decline during 2005 to 2010. Hirway (2012) argues that a large part of the female "missing labour force" is not really missing or withdrawing, but they are in sectors that are "difficult to measure" and could not demarcate between unpaid family work and specified activities. Majority of the specified activities are not included in the Indian SNA despite the fact they are included under United Nations-SNA, and those considered economic among the non-marketed activities are lumped into "out of the labour force," signifying negligible participation. As female work participation rate shot up abnormally high in 2005, it is not unlikely that some of the activities performed by women were captured as contributing family work, which in the subsequent rounds were captured in domestic duties or those engaged in specified activities and therefore went "out of the labour force," despite the fact that their work did not reduce. Time-use surveys can be used to supplement and complement the labour force surveys, to get an improved estimate and a better understanding of the female workers, both paid and unpaid.

## Conclusions and Policy Implications

The paper reveals the significance of varied social, cultural, and economic constraints behind low and declining female participation in the labour force in India, even as the economy is witnessing robust growth and is aiming for higher growth rate (and has become the fastest growing large economy in the world from 2015). Given such constraints, decisive macro-economic reforms to create employment opportunities through an improved policy environment, especially to propel non-farm employment, particularly in rural areas are needed to pull women up along the upward slope of the "U." A recent estimate projecting the future female labour force indicates that at the current LFPR, female labour force is likely to increase from 129 million in 2011–12 to 140.9 million in 2016–17 and to 148.3 million in 2019–20 (ASSOCHAM 2014). India's youth bulge—the demographic dividend—is now the sharpest with declining "dependency ratio" (the share of children 0–14 years and the elderly 65–100 years), and India has a much younger population than United States, Europe, Japan, China and many other countries. The International Monetary Fund (IMF) in 2011 estimated that this dividend has the potential to add 2 percentage points per annum to India's per capita GDP growth over the next two decades. As fertility is falling faster,

the time spent by women in bearing and rearing children would then fall. Women could then be expected to join the labour force in large numbers. And as the education level of females is increasing, there would be an expectation for more high value added jobs. If this dividend is to be harnessed, an educated female workforce would actually be a bonus.

However, with an extremely low and declining female LFPR, the dividend can be a negative one. The real dependency ratios (number of people actually employed per retiree) would continue to fall if women are not included in the labour, which can then negatively affect the potential economic growth.

More females are opting for secondary school education. To improve employability of females in more productive and better remunerative jobs, the education system needs to be reformed at this juncture bringing in improved technical education. Vocational education and training, which was limited to higher secondary level for the last 30 odd years, had been extended to secondary level (9th and 10th standard) only after the National Skills Qualifications Framework was notified in 2013, which then rolled out in 2,992 secondary schools (by March 2016). It is essential to spread to all schools, taking note of the upcoming trades and linking the curriculum with the needs of industry.

There are lags in the training institutes with very few courses in services (which is where women prefer to work). They offer gender-stereotyped courses (which practically do not have any demand in the economy). The institutes also lack hostels for women, have very few female teachers, are mainly urban-located which dis-incentivises rural women from pursuing vocational education (Mehrotra 2014). Thus, skill development measures, especially for girls, need to be promoted to improve employability and thus increase the transition to non-agricultural employment.

Along with skill training in upcoming trades, there is a need to follow up with institutional support for self-employed women for marketing their product, initial finance on easy terms, working finance facilities, infrastructural and macro-policy support.

With increased mechanisation in agriculture, women have largely stepped back with men taking over. With adequate skill training, women can also handle the specialised machines. Along with these supply-side initiatives, if decent and productive employment in the non-agricultural sector is generated then that will absorb the girls finishing school into the labour force. More diversified employment opportunities

should be created, particularly in the villages or nearby towns, so that women can commute easily on a daily basis, which requires greater investment in the infrastructure of small towns and cities, as that will attract employers. It also requires a renewed focus on cluster development (and not just on Micro Units Development and Refinance Agency-type credit-giving institutions) so that these clusters create new jobs in the vicinity of where girls are studying.

Increased investment in sectors like health and education, where a significant share of women work, can generate more employment in these sectors. Provision of basic services will also reduce their burden, releasing them to participate in the labour market. A major factor restraining female participation is the increasing burden of domestic responsibilities and care work. Childcare facilities are needed throughout the country. Hostel/housing facilities for single working women, and better public transport in metros or tier-II/tier-III cities can encourage women to work.

A significant share of women in India work as unpaid family workers, who neither own the land/enterprise nor do they receive any monetary compensation for their work. They are therefore devoid of any rights, credit, extension services, any profits accruing from the land, decision-making or any relief packages in case of any distress. They merely act as a reserve army of labour who comes in and goes out, as and when needed. This does not really engage them in the labour force in the truest sense. While women in India have the legal right to own land, according to the Hindu Succession (Amendment) Act, 2005, very few do have it in reality. For those women who do own land, ownership rarely translates into control of the land, decision-making or of the assets flowing from the land. The state has a responsibility to improve the actual implementation of this act. Access to productive inputs and savings avenues can empower the women economically.

In India, there is high dependence on family labour and limitations to deploying mechanised milching systems, as many farmers engaged in dairy sector are small and marginal (even though their numbers have been falling as we noted), with an average herd size of one to two milch animals. With increased demand for milk, processed milk and milk derivatives, the National Dairy Development Board launched the National Dairy Plan in 2012 to focus on means to grow production and provide producers with greater access to the organised milk processing sector, thus strengthening the direct supply channel and eliminating the intermediaries, both of which will ensure better compensation to small and medium milk producers.

Cooperative sector plays a vital role in this sector; but newer concepts on herd aggregation, collective animal management and mechanisation, are at a very nascent stage in India. Policies to support the cooperatives and establish vertically integrated dairy chains (village level supply chain and high end processing capacities), can help to establish last-mile linkages and complement the dairy development initiatives of the cooperatives and thereby lead to a larger share of the organised sector in milk processing. Activities allied to agriculture, like dairying and poultry, along with technology penetration, financing, dairy clinic, insurance, etc, should be promoted and supported to make the sector more profitable, scalable, and help women to link with the market, so that the financial gains accrue to these women. These are essential to help women to transcend from unpaid family workers to paid workers or entrepreneurs. Also, agro-based manufacturing needs to be promoted and bring women into these activities. Further, research is also needed to understand the forces that could increase female labour force participation as women's education levels increase. Finally, better quality control in employment statistics is required to prevent mismeasurement of women's labour force participation.

To conclude, India is in an advantageous position globally, given its demographic dividend and positive investment climate. Appropriate macroeconomic and social policies are needed to realise the full economic potential of women, which can then harness the demographic dividend, empower women, raise economic growth rate and at the same time ensure a more inclusive growth process.

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# Gender Equality and Development: An Economic Analysis in Context of Indian Economy

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## Abstract

*Sprawling inequalities persist in their access to education, health care, physical and financial resources and opportunities in the political, economic, social and cultural spheres in India. Gender inequality holds back the growth of individuals, the development of nations and the evolution of societies to the disadvantage of both men and women. The review concludes that there is strong evidence that gender equality can promote economic growth. Women's access to employment and education opportunities reduces the likelihood of household poverty, and resources in women's hands have a range of positive outcomes for human capital and capabilities within the household. Women empowerment and economic growth are closely related: in one direction, development alone can play a major role in driving down inequality between men and women; in the other direction, empowering women may benefit development. Women's empowerment and economic development are closely interrelated. While development itself will bring about women's empowerment, empowering women will bring about changes in decision-making, which will have a direct impact on development. Contrary to what is claimed by some of the more optimistic policy makers, it is, however, not clear that a one-time impulsion of women's rights will spark a virtuous circle, with women's empowerment and development mutually reinforcing each other and women eventually being equal partners in richer societies. The focus of the development agenda should then be on enhancing a woman's capability. This abridges the gender gap and assures not only economic growth but economic development.*

**Key words:** Economic Development, Gender Equality, Socio-economic Upliftment, Poverty, Unemployment, Health, Decision Making, Women Empowerment

## Introduction

The word 'gender' refers to the way societies distinguish men and women and assign them social roles. The division between sex and gender was introduced to deal with the general trend to attribute women's subordination to their anatomy. Gender is seen directly related to the roles and behaviour assigned to women and men based on their sexual differences.

Gender equality is a very crucial component of economic development. No country can progress if fifty per cent of its population is vulnerable and disadvantaged in terms of basic requirements, access to education, livelihood options and political choice. Therefore, gender equality is a must for any country to develop.

The reality of women's lives remains invisible to men and women alike and this invisibility persists at all levels beginning with the family to the nation. Although geographically men and women share the same space, they live in different worlds. The mere fact that "Women hold up half the sky"- does not appear to give them a position of dignity and equality. True, that over

the years women have made great strides in many areas with notable progress in reducing some gender gaps. Yet, the afflicted world in which we live is characterised by deeply unequal sharing of the burden of adversities between women and men. Sprawling inequalities persist in their access to education, health care, physical and financial resources and opportunities in the political, economic, social and cultural spheres. Gender inequality holds back the growth of individuals, the development of nations and the evolution of societies to the disadvantage of both men and women. Gender issues are not simply talking about women's issues. Understanding gender means understanding opportunities, constraints and the impact of change as they affect both men and women. The impact of inequality is reflected in the status of women worldwide and in India.

## Literature Review

A gender and empowerment framework has to depart from the distinction between the concepts of gender and women. 'Women' is not gender, but women are a category of people. Gender is the socially constructed difference between women

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and men; it is not so much about biological differences between women and men, but about how society gives meanings to these differences in femininity and masculinity, and the power relations and dynamics that come about as a result of this. Knowing what women do in a chain or household, or how women or men spend their income is a first starting point, but does not necessarily say anything about gender. Bearing the woman/gender distinction in mind, empowerment can be defined as “a process by which those who have been denied the ability to make strategic life choices acquire the ability to do so” (Kabeer, 1999). Empowerment is about changing gender relations in order to enhance women’s ability to shape their lives. Empowerment is hence about a process of change, and encompasses both the question of what is changing and the question how that change is being valued.

Three dimensions of empowerment can be distinguished: resources, agency and achievements (Kabeer, 1999). Resources serve to enhance the ability to make choices and shape one’s life. They include (access to) material, human and social resources, and can be both actual and future claims. Agency is understood as the “ability to define one’s goals and act upon them” (Kabeer, 1999). It is not only about observable action, but also about meanings, motivations and purpose. Resources and agency combined constitute what Amartya Sen has called capabilities, that is the potential people have for living the lives they want, of achieving their valued ways of being and doing. Achievements are the manifestations or outcomes of the different choices people make, and the different shapes their lives take. It is important to avoid focusing on the differences in the choices people make. Empowerment is not about those differences; it is concerned with reducing the inequalities in people’s capacity to make choices, rather than the actual choices themselves. That means that gender differentials in functioning achievements are not by definition a problem, because differences in preferences have to be distinguished from denials of choice. This gender gap is a manifestation of the widespread violence and discrimination against women in four key areas, namely, (1) Economic empowerment, (2) Educational attainment, (3) Health and survival and (4) Political empowerment.

Gender inequality is often greater among the poor, both within and across countries. For example, while the gender gap in primary and secondary gross enrolment has rapidly gone down between 1991 and 2009 worldwide, it is still wider in poor countries (7 percentage points for primary enrolment, 13 percentage points for secondary enrolment) than in middle income countries (3 percentage points for primary enrolment, 2 percentage points for secondary enrolment) and rich countries (0 percentage points for primary, 1 percentage point for secondary). And within countries, gaps between boys and girls

persist in poorer and more isolated communities (World Bank 2011). The participation of women in the labor market has grown by 15 percent in East Asia and Latin America between 1971 and 1995, a rate faster than that for men, and the gender gap in wages has narrowed as well. The life expectancy of women has increased by 20–25 years in developing countries over the past fifty years (World Bank 2011), while male life expectancy did not improve as much.

Wolfensohn makes four claims. First of all, that education of girls would change outcomes for their children and the rest of us. We might call this a “reduced form” argument: broad “empowerment” of women could change outcomes. Education could have an effect, for example, through, for example, by improving their understanding of how to raise children, use contraception, and manage their homes. His second claim is that empowerment of women in a narrower sense (power or the ability to influence decision-making) would also change outcomes. The third claim is that these changes would be positive. The comment also raises a fourth issue, assuming that increasing decision making of women would indeed lead to different (and better) outcomes, that is what policy instruments are available to policy makers to achieve these changes. Do they need to wait for it to come from improvement in their human capital (the quote suggest it would be a consequence of their improved education), or can policy interventions, such as changes in the law, change in electoral rules, changes in the rule governing programs, or other similar “top down” interventions change effective power?

Breierova and Duflo (2004) use the massive expansion of school construction in Indonesia in the 1970s to generate variation in the differences in schooling between husbands and wives based only on their region of birth and their dates of birth to get around this problem. When they correct for the fact that more-educated women differ from less-educated ones, they still find that, conditional on the household’s average education level, households have fewer children when the wife is more educated. However, they did not find a lower infant mortality. While there is no doubt that education has a positive effect on child mortality, it is not clear that girls’ education is much more critical than boys’ education. Chou, Liu, Grossman and Joyce (2010) use the same empirical strategy to study the impact of father and mother education on child health in Taiwan (which introduced compulsory junior secondary schooling in 1968 and introduced it progressively in different regions). They find strong and positive effects of both father and mother education on child survival, and one effect is not significantly greater than the next. While more needs to be learnt on this, the automatic presumption that female education is more important than male education for child

mortality and for other children outcomes may need to be revised: it seems that both matter.

Micro-credit schemes or welfare agencies that restrict credit or transfers to women on the grounds that the money will be put to use germane to development implicitly recognize that women are not entirely powerless. If women were powerless, then the money would be immediately appropriated by their spouses, and we would see no impact of distributing the money to women rather than to men. Conversely, if households were harmonious entities where everyone had the same preferences and desires, then the nominal ownership of money would not matter within the household. It would all go to a common pool and channelised towards the best uses for the families. Panda (2014) found out that micro finance assistance resulted in reduction of domestic violence and women empowerment in India.

In practice, there are good reasons to think that real families are somewhere between these two extremes—neither ruled by a dictator, nor without discord. Instead, all household members have different preferences, and different ideas about many things, from how many children to have to how best to spend household income, and each idea is given a different weight in the ultimate decision depending on each member's information set and bargaining power. In demographic and health surveys (DHS) for example, women typically report wanting fewer children than their husbands (Becker, 1999). A consequence of this difference is that if women can hide their contraceptive choice from their husbands, final fertility may be lower. Ashraf, Field and Lee (2010) provide a clear demonstration of this phenomenon in Zambia. In an experiment, they provided 836 married women in Lusaka, Zambia with a voucher guaranteeing free and immediate access to a range of modern contraceptives through a private appointment with a family-planning nurse. Some women received the voucher in private, while others received the voucher in the presence of their husbands. This made a huge difference: compared to cases where husbands were involved, women who were seen alone were 23 percent more likely to visit a family-planning nurse, 38 percent more likely to ask for a relatively concealable form of contraception (injectable contraceptives or contraceptive implants), and 57 percent less likely to report a unwanted birth nine to fourteen months later. It is important to note that this does not mean that allowing women to conceal contraception would be a desirable policy: it is quite possible that, once husbands do learn that this option exists, they become quite suspicious of their wives. They could for example prevent them to go to the health clinic altogether, delaying important care. But the paper is clearly demonstrating that the lack of congruence in preferences and the ability (and

willingness) to conceal information is a critical element in understanding household decisions.

Ashraf (2009) present lab-experiment evidence that also demonstrates the importance of information: men who need to decide how to allocate a prize do it very differently when they must share the information on what they decided with their wives and when they must negotiate with them before taking the decision. The need to keep things hidden from, or at least not immediately available to, their husbands appears to lead women to forgo convenience to keep things quiet, and some times to act in a way that lowers overall efficiency.

Anderson and Baland (2002) argue, for example, that the rotating savings and credit associations (ROSCAs) popular especially among women in many part of Africa are primarily a way for women to keep savings away from their husbands. Schaner (2011) provides striking evidence of this phenomenon in Kenya. As part of an experiment, she opened bank accounts for men and women in Kenya. After having opened the accounts, some randomly selected individuals received a free ATM card, which cut the cost charged by the bank for withdrawals (in addition to making it more convenient). Men behaved as expected: those who got the ATM made more active use of the accounts: they saved more, and withdrew and deposited money more often. But the effect was opposite for women: those who got the ATM used the accounts less. Further analysis showed that this effect was concentrated among women with low bargaining power. It thus seems that women were less willing to use the account if it was easy for their husbands to get the money out. In this context, the share of the household budget contributed by a member may well have an important impact on how much weight is given to the expenditures he/she favors. When women are decision makers within the household, how much they bring to the table can have an important impact on ultimate choices. Empirically, a large literature has tested whether income in the hands of women of a household has a different impact on intra-household allocation than income in the hands of the men. The evidence suggests that, compared to income or assets in the hands of men, income or assets in the hands of women is associated with larger improvements in child health (e.g. Thomas, 1990), and larger expenditure shares of household nutrients, health, and housing (e.g. Thomas, 1992). These studies may in general, however, suffer from the problem that families where women earn a larger share of the income are different from those where women do not. Thomas (1990, 1992) uses un-earned income to circumvent the issue that earned income is endogenous (and corresponds to the labor supply decisions of men and women). But this only partially addresses the problem, because un-earned income is often the

product of assets (so women with more un-earned income may have come to the marriage with more wealth, and therefore are different). Moreover, marriage decisions further complicate the interpretation of these results, as men who marry richer women may be more likely to have tastes similar to theirs.

Duflo (2003) takes the strategy of using un-earned income a step further, and uses the rapid expansion of the Old Age Pension Program in South Africa to address the remaining identification issues. At the end of apartheid, the government committed to achieving parity of benefits and eligibility requirements between whites and blacks. This was achieved mostly by increasing the benefits received by blacks, which grew very rapidly between 1990 and 1993. In 1993, 80 percent of black women above age 60 and 77 percent of black men above age 65 received the pension. The maximum benefit of 370 rands per month—about 3 US dollars per day was equal to one half of the minimum wage, and about twice the median per-capita income in rural areas. Due to traditional living arrangements, nearly one-third of black children under the age of 5 currently live with a pension recipient. Children who live with a pension recipient tend to come from relatively

disadvantaged backgrounds, and so they tend to be smaller than other children their age. To estimate the effect of receiving a pension on the anthropometric status of children, Duflo exploits the fact that height reflects accumulated investments in child nutrition. The larger the proportion of life during which a child was well-nourished, the taller she will be given her age. Expansion of the program in the early 1990s increased the likelihood of receiving a pension among qualified elderly people, and the benefits became substantially larger. Thus, to the extent that the pension resulted in improved nutrition, children born after the expansion were more likely to have spent a larger fraction of their lives well-nourished if they lived with a pension recipient.

### Study Findings

In India, various academicians and researchers have tried to link the economic development with gender equality. This paper looks into the various aspects of gender discrimination particularly in terms of wage, education and health care. Table 1 reflects on the basic development indicators of India based on the 1971, 2001 and 2011 censuses.

**Table 1 Development Indicators**

<b>Development Indicators</b>	<b>Women</b>	<b>Men</b>	<b>Total</b>
<b>Population (in millions)</b>			
1971	264.1	284	548.1
2001	495.7	531.2	1027.1
2011	586.46	623.7	1210.19
<b>Decennial Growth</b>			
1971	24.9	24.4	24.6
2001	21.7	20.9	21.34
2011	18.12	17.19	17.64
<b>Sex Ratio</b>			
1971	930	-	-
2001	933	-	-
2011	940	-	-
<b>Expectation of Life at Birth</b>			
1971	50.2	50.5	50.9
2001-06	66.91	63.87	—
2011	69.9	66.9	68.3
<b>Mean Age at Marriage</b>			
1971	17.2	22.4	—
1991	19.3	23.9	—
2011	22.2	26	24.1

<b>Birth Rate</b>			
1971			36.9
	–	–	
2008			22.8
	–	–	
2011			20.97
<b>Death Rate</b>			
1970	15.6	15.8	15.7
2008	6.8	8	7.4
2011	-	-	7.48
<b>Infant Mortality Rate per 1000 Live Births</b>			
1978	131	123	127
2008	55	52	53
2011	46	43	44
<b>Maternal Mortality Rate</b>			
1980	468		–
		–	
2006	254		–
		–	
2007-09	212		
<b>Literacy Rate</b>			
1971	7.9	24.9	16.7
2001	54.28	75.96	65.38
2011	65.5	82.1	74
<b>Work Participation Rate (%)</b>			
1971	14.2	52.8	34.3
2001	25.68	51.93	39.26
2011	25.51	53.26	39.79

Source: Author's Compilation

Table 2 reflects the sex ratio among some of the countries including the BRICS where it shows India is lagging behind from many countries in terms of sex ratio. The sex ratio in the age group of 0-6 years is continually declining from 927.31 in 2001 to 914.23 in 2011. This also hints us about the issue of the female foeticide in India.

The term “wage” applies to a payment which is paid to workers as remuneration for the work done by them. It is generally a pecuniary amount. In the words of Benham, “Wages are a sum of money paid under contract by an employer to a worker for the services rendered.” Whether taking developed or developing countries the gender discrimination among women is more identified in terms of wage rate differentials (Collier, 1994). The existence of a discrepancy in wage payments between men and women in the labor market is a universal phenomenon regardless of the economic structure of the country (Newell and Reilly 2001). There have been various theoretical analysis which have been made so as to explain the

wage determination in the labour market but most of these analysis have proved to be inadequate and thus still many challenges are still their regarding wage discrimination and wage inequalities (Remesh, 2000).

Women continue to be seen as cheap labour although Women play a very vital role in the economic development of the country. Still both in developed as well as in developing nations, the discrimination against women continues to occur. In labour market, women are not only put in low wage jobs but also paid less remuneration than men. Discrimination among women labourers in terms of wage payments is a very common phenomenon in India. Wages earned by women are generally lesser than their male counterparts.

Both at the national and international levels various laws have been made with the prime focus on preventing women workers from discrimination. International Covenant on Economic, Social and Cultural Rights (ICESCR) has passed a law asking

states” to ensure that men and women have equal social, religious and cultural rights. The law of covenant also focuses on the fact that the remuneration should be equal for equal work and there should not be any kind of discrimination on the basis of sexes (CESCR, 1990).

So far as India is concerned, there are many provisions in the constitution which clearly talks about women labour equality. Article 15 of the Indian constitution guarantees the states will not discriminate on the basis of sex. The equal remuneration act also known as TERA was passed in 1976. It was basically the first legislation which prohibits discrimination on the basis of sex in India. As per TERA, male and female employees who are performing “same work” will be paid equal remuneration. “Same Work” has been defined as one which requires similar skills, efforts and responsibilities which are performed under

similar condition. Article 39 as defined by the Indian constitution also guarantees the principle of equal pay for equal work for both men and women. The fair wage committee established in 1948 accepts the principle of equal wages. As per this committee, the equal pay principle does not apply when “Male Work” and “Female Work” is distinguished. However, despite all the legal provisions wage discrimination based on sex persists in India.

Table 3 depicts the Female male worker ratio along with the sex ratio in the various age groups for rural and urban India. In the age group of 15-59 years, which is the most productive age group in the total population, the female male worker ratio is 384 for rural and 226 for urban India as against 952 and 929 sex ratio in the same age group.

**Table 2 Sex Ratio in India in comparison to other countries**

<b>Country</b>	<b>Sex Ratio</b>
Brazil	1031
Russian Federation	1165
India	940
China	927
South Africa	1028
France	1056
Germany	1038
Japan	1054
United Kingdom	1037
USA	1026
Australia	1011
Malaysia	970
Indonesia	1003
Ethiopia	1010
World	984

Source: Census 2011

*Women wage discrimination in India – An analysis*

Table 4 gives the workforce participation rate for both female and male workers in rural and urban India. It is clear from the data that there exists huge gender disparity in the work force

participation rate. In fact in the rural India the participation of the male workers is more than double the female workers and similarly in urban India it is more than three times.

**Table 3: Main Workers in various age groups in Rural and Urban India**

Age group	Rural		Urban		Total	
	Sex Ratio	Female Male worker ratio	Sex Ratio	Female Male worker ratio	Sex Ratio	Female Male worker ratio
5-14	919	683	896	503	913	634
15-29	928	390	928	232	928	336
30-59	973	381	930	223	958	323
15-59	952	384	929	226	944	327
60+	1036	319	1027	209	1033	292
<b>Total</b>	949	381	929	227	943	327

Source: Census 2011

**Table 4: Workforce Participation Rate**

Year	Rural		Urban	
	Female	Male	Female	Male
2000-2001*	28.7	54.4	14.0	53.1
2001-2002*	31.4	54.6	13.9	55.3
2002*	28.1	54.6	14.0	53.4
2004-05	32.7	54.6	16.6	54.9
2005-06*	31.0	54.9	14.3	54.0
2007-08*	28.9	54.8	13.8	55.4
2009-10	26.1	54.7	13.8	54.3
2011-12	24.8	54.3	14.7	54.6

Source: Census 2011; \* Based on thin sample

**Table 5 Unemployment Rates and Average wage/salary received per day**

India	Rural		Urban	
	Female	Male	Female	Male
Unemployment Rates 2011-12	2.9	2.1	6.6	3.2
Average wage/salary (in Rs.) received per day	201.56	322.28	366.15	469.87

Source: NSSO 68th Round, July 2011- June 2012.

From table 5 the average wage/salary received by female workers is low in comparison to their male counterparts.

**Table 6 Wage rates (in Rs.) per day per persons in age group 15-59 years (2009-2010)**

All India Category of workers	Rural		Urban	
	Male	Female	Male	Female
	Casual Labour in MGNREGA public works	90.93	87.20	-
Casual labour in other public works	98.33	86.11	-	-
Casual labour in other type of works	101.53	68.94	131.92	76.73
Regular wage/salaried Persons	249.15	155.87	377.16	308.79

Source: NSSO 66th Round (July 09 – June 2010) CSO, MOSPI, Gol

**Table 7 Average Salary per day received according to Education level (2009-10)**

All India General Education Level	Rural		Urban	
	Male	Female	Male	Female
	Not Literate	135.72	65.47	156.60
Literate upto Middle	160.04	80.32	183.80	114.38
Secondary and Higher Secondary	267.14	151.54	293.26	237.61
Diploma/Certificate	355.48	291.01	481.26	369.73
Graduate and Above	403.05	285.98	634.92	499.98
All	249.15	155.87	377.16	308.79

Source: NSSO 66th Round (July 09 – June 2010) CSO, MOSPI, Gol

Table 6 shows the wage rate differentials among men and women in rural and urban areas. It clearly reveals that wages received by women are fairly less than men. If we look at workers in MGNREGA in rural areas, it is women who predominate however they receive fewer wages than men. From table 7, it is clear that the wage differentials start declining as level of education increases in the urban areas. In rural areas however, it increases.

#### Gender Gaps in Education and Health

Gender inequality in education is a persistent issue in Indian society, especially for girls from rural areas and lower socioeconomic backgrounds. India has achieved success in

moving toward universal school enrolment and in enacting policies to address educational inequalities such as those based on gender. However, education gaps still exist. There are a lot of social factors which hinder full participation of girls in schools. A girl child is seen as a liability by the parents who feel that it's better to save money for her marriage than to invest in her education. This stigma no matter what continues although has declined due to spread of awareness in rural and urban areas. This can be seen from the literacy rates (table 8) over the past seven decades. The male literacy rates have increased from 27.2 per cent to 80.9 per cent from 1951 to 2011 census year. Similarly the female literacy rates have increased from 8.9 per cent to 64.6 per cent from 1951 to 2011.

**Table 8 Literacy Rates (in percentage)**

Census Year	Persons	Males	Females
1951	18.3	27.2	8.9
1961	28.3	40.4	15.4
1971	34.5	46.0	22.0
1981	43.6	56.4	29.8
1991	52.2	64.1	39.3
2001	64.8	75.3	53.7
2011	73.0	80.9	64.6

1951-1971: Aged group 5 and above, 1981-2011: Aged group 7 and above

Source: Office of the Registrar General and Census Commissioner, India

In terms of Gross Enrolment Ratio (GER) the female students have shown a persistent increase at all the levels i.e. from primary to upper primary. However the average annual drop out is seen higher for girl students than boy students for Upper Primary. The drop out in the Upper Primary level is attributable

to many reasons like lack of a nearby Upper Primary school, cultural attitudes toward female education, and being diverted to household and childrearing tasks that may have economic value for the family (GOI 2000; Probe Team 1999).

**Table 9 Gross Enrolment Ratio (GER): All categories of Students**

Level/Year	Primary (I-V) 6-10 Years			Upper Primary (VI - VIII) 11-13 Years			Elementary (I-VIII) 6-13 Years		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2009-10	113.8	113.8	113.8	84.3	79.0	81.7	102.5	100.4	101.5
2010-11	114.9	116.3	115.5	87.5	82.9	85.2	104.5	103.3	103.9
2011-12	105.8	107.1	106.5	82.5	81.4	82.0	97.2	97.6	97.4
2012-13	104.8	107.2	106.0	80.6	84.6	82.5	95.6	98.6	97.0
2013-14	100.2	102.6	101.4	86.3	92.8	89.3	95.1	99.1	97.0
2014-15	98.9	101.4	100.1	87.7	95.3	91.2	94.8	99.2	96.9

Source: MHRD, Gol and NUEPA, New Delhi

**Table 10 Average annual drop-out rate in school education for all categories of students**

Classes/Year	Primary			Upper Primary			Secondary			Senior Secondary		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2011-12*	5.89	5.34	5.62	2.13	3.20	2.65	-	-	-	-	-	-
2012-13*	4.68	4.66	4.67	2.30	4.01	3.13	14.5	14.5	14.5	-	-	-
2013-14*	4.53	4.14	4.34	3.09	4.49	3.77	17.9	17.8	17.8	1.48	1.61	1.54

Source: NUEPA, New Delhi; \*Figures related to school education are provisional.

An educated mass of population definitely is necessary but not sufficient for the progress of a nation. The mass needs to be health as well for helping the nation in achieving its long term goals. The health and family welfare indicators in table 11 indicate few important facts. The literate women in the age group of 15-49 years are 68.4 per cent in 2015-16 as compared to 55.1 per cent in 2005-06. However, only 53.3 per cent women

use any type of family planning method and just 20.9 per cent women have comprehensive knowledge about HIV/AIDS which is too dismal. The infant mortality rate and under five mortality rate have declined no doubt but still progress is needed in this. Only 21 per cent of mothers had full antenatal care in 2015-16. 53 per cent of women in the age group of 15-49 years are anaemic as per 2015-16.

**Table 11: Some Health and Family welfare Indicators for women**

Indicators	2005-06 (NFHS-3)	2015-16 (NFHS-4)
Women age 15-49 years who are literate(%)	55.1	68.4
Women age 15-49 years with 10 or more years of schooling (%)	22.3	35.7
Women age 20-24 years married before 18 years of age (%)	47.4	26.8
Total Fertility rate (children per woman)	2.7	2.2
Women age 15-19 years who were already mothers or pregnant at the time of survey (%)	16.0	7.9
Infant Mortality Rate (IMR) (per 1,000 live births)	57.0	41.0
Under-five Mortality Rate (U5MR)(per 1,000 live births)	74.0	50.0

Use of Family Planning Methods in 15 -49 years age group (Any method) (%)	56.3	53.5
Mothers who had at least 4 antenatal care visits (%)	37.0	51.2
Mothers who had full antenatal care (%)	11.6	21.0
Mothers who received postnatal care within 2 days of delivery (%)	34.6	62.4
Institutional Births (%)	38.7	78.9
Institutional Births in public facility (%)	18.0	52.1
All women age 15 -49 years who are anaemic (%)	55.3	53.0
Women who have comprehensive knowledge of HIV/AIDS (%)	17.3	20.9

Source: Ministry of Health and Family Welfare

#### Participation in Decision Making

The Universal Declaration of Human Rights recognizes the right of every person to take part in the government of his or her country. Equal access of men and women to power, decision-making and leadership at all levels is a necessary precondition for the proper functioning of democracy. In 2015, 8 out of 45 women occupied Ministerial positions in the Central Council of Ministers, more than 17 per cent against around 10 per cent women participation in 2004. 62 females have been elected in 2014 Elections constituting more than 11 per cent share in the Lower House. Female participation in elections has been 66 per cent in the sixteenth General elections in 2014 which is more or less equal to male participation of 67 per cent. Currently in the states, women share is only 9 per cent in assemblies and only 6 percent in State Councils. Bihar, Haryana and Rajasthan have 14 per cent women in their respective Assemblies, whereas, there is no women representation in Mizoram, Nagaland and Puducherry. In Odisha, women share is only 7 per cent in assembly. In the Panchayat setup, States Governments have ensured at least 30 per cent seats for women. Accordingly, overall 46.7 per cent women are present; with maximum 58.6 per cent in Jharkhand and minimum 32.3 per cent in Goa. There were 2 women judges out of 30 judges in the Supreme Court and there were only 65 women judges out of 546 judges in different High Courts with maximum 33 per cent in Sikkim High Court and no women judge in 8 High Courts. Among the All-India and Central Group A Services, 30 per cent females are in Indian Economic Service and only 12 per cent in Indian Administrative Service.

#### Conclusion

Study reveals that there is gender wise wage discrimination both in rural and urban areas of India. But in rural areas it is more pronounced which could be attributed to the lack of awareness, illiteracy, knowledge and skills among the rural women. However, in urban India even though there is knowledge and awareness still wage discrimination exists. Similarly so far as education is concerned, there is an increase in the literacy rates among both men and women over past seven decades but the increase in women is slow than men. The GER has substantially shown an increase for both boy and girl students in all the levels. The drop out however is high among girl students in Upper Primary level which could be due to various socio-economic factors. Health statistics reveal lack of awareness among women regarding the diseases and pregnancies and family planning methods. To sum up gender discrimination exists in all spheres of life. There is need for more collaborative support from not just government but academia, industry and NGOs for improvement of the status of women. The awareness at times is more important than the cause itself. The development agenda should give priority to the existing gender gap and try to achieve the optimum by reducing the gap.

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# Affordable Housing in India: Issues and Directions for Reforms

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## Abstract

*Cities are the engines of economic growth and create large number of employment opportunities. However, rapid urbanization has resulted in severe housing shortages in urban areas. This has also resulted in a rise in slums. This paper explores the need for affordable housing in India and the various challenges faced by such projects. We draw lessons from several international practices which can be replicated in India. The potential of rental housing and Public Private Partnership (PPP) in ensuring 'housing for all' has also been explored. The paper recommends various steps that can be taken for the successful implementation of affordable housing projects.*

**Keywords:** Affordable Housing, Rental Housing, Public Private Partnership (PPP), Housing for all

## Introduction

Cities are the engines of economic growth. Due to agglomeration and network economies, cities generate a lot of employment opportunities. Cities have provided a majority of the migrants with jobs. However, they have failed to provide them a decent place to stay. A certain section is also willing to pay even a higher fraction of their earnings towards housing but still fail to find a suitable dwelling. As long as new jobs can be freely added to the city, additional units will be required to house those who fill those jobs.

The 12th Five Year Plan estimated the urban housing shortage to be 18.78 million. This figure is expected to increase in the years to come on account of rapid urbanization. In such a scenario, providing affordable housing is one of the major concerns of the Government of India. This is a herculean task and faces several challenges. The fact that significant proportions of urban households live in sub-standard and congested conditions bears testimony to the fact that they cannot afford decent and adequate housing.

Housing is one of the basic necessities of life along with food and clothing. Provision of housing is not simply providing four walls and a roof but it also demands provision of basic amenities like water and sanitation, connectivity, electricity etc. Due to rapid urbanization, Indian cities are witnessing an increasing divergence between the supply and demand for housing. The

Economically Weaker Sections (EWS) and Low Income Groups (LIG) are the worst affected and as a consequence, depend on government support for housing. Affordable housing is different from low cost housing. While the latter comprises of bare minimum housing facilities, the former includes the provision of basic amenities like schools, hospitals and other civic services.

The Government of India has a vision to provide housing to all its citizens by 2022. In urban areas, housing for EWS and LIG requires special attention in the form of affordable housing. Looking at the importance of affordable housing, this paper explores the various factors associated with it. The rest of the paper is organized as follows: section 2 provides a brief picture of the state of housing in India and section 3 lays out the rationale behind affordable housing. Section 4 discusses the issues faced by affordable housing provision in India. Section 5 presents the international practices on affordable housing. Section 6 is on rental housing and section 7 highlights the importance of Public Private Partnership. These two are extremely important for providing affordable housing. Section 8 recommends some of the steps that can be taken to ensure housing for all. Section 9 concludes.

## State of Housing in India

India's urban population has been increasing rapidly. It grew at a rate of 2.8 percent from 2001 to 2011. According to 2011 Census of India, 377 million people lived in urban areas. The

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urban population is projected to rise to 820 million by 2051 (United Nations 2015). The shortage of housing is closely associated with rapid urbanization. The housing shortage in urban India is of the order of 18.78 million units (MoHUPA 2012). 17.96 million or 96 percent of the shortage pertains to EWS and LIG. While there is a shortage of housing, there are also vacant houses in plenty. 11.09 million houses were vacant in urban areas, as reported by Census 2011. These figures suggest that policy failures could have contributed to the lack of decent housing and rise of slums in urban areas. According to KPMG estimates, about 1.7 to 2 lakh hectares of land (Floor Area Ratio is assumed to be 1.5 times the land area) is required for meeting the urban housing requirements by 2022 (KPMG 2014). If the unoccupied houses are brought into use then the actual requirement of land might decrease.

### **Rationale for Affordable Housing**

An increased need for housing accompanies the increased pace of urbanization. Several other factors have heightened the demand for affordable housing. Along with the EWS and LIG, a significant number of middle income households also demand affordable housing. The middle class segment has expanded due to a rise in income level.

Apart from the need to accommodate the housing demands of various sections of the population, investment in construction development sector can have multi dimensional effect on the economy. This will not only strengthen the infrastructure of the city and expand the existing housing stock but also generate employment. It generates jobs for unskilled workers, engineers and architects. It gives a boost to several financing and supporting services. Further, demand can be created for the products of several related industries along with those of the manufacturing sector. Thus, there are forward and backward linkages and it is appropriate to invest in the construction development sector.

### **Issues Related to Affordable Housing**

Housing projects are subjected to several challenges. A high gestation period, limited and expensive capital and taxes are some of the issues facing the housing projects. Adherence to the various structural and development norms are the other challenges. Several supply side as well as demand side factors limit the availability of affordable housing. The major constraints are as follows:

- Land is not adequately available for housing projects. The high population density in India exerts an upward pressure on the demand for land and leads to a surge in land prices.

Sometimes prices rise to a level not feasible for mass construction projects.

- The scarcity of land increases land prices and escalates the project cost. Rise in the prices of construction materials like cement and steel add up to the problem. In some areas shortage of labour leads to higher wages further increasing the total project cost.
- Despite lower prices majority of the population are not able to own a house due to the unavailability of finances at decent rates. Measures of micro-finances need to be taken up to ensure financial access to the poor.
- In many countries private players play an active role in the development of affordable housing. However, in India they mostly target high-end projects.
- Excessive control by authorities on development of land in terms of parking norms, restricted Floor Space Index (FSI) etc. are impediments on the path of affordable housing projects. They also result in high land prices and artificial shortages.

Apart from these there have also been cases where such houses meant to accommodate the poor are either sold out or rented while they continue to live in slums. Reselling of such property should be restricted for a certain period initially. Just like any government scheme, there are inclusion and exclusion errors. It is necessary to ensure proper targeting of the affordable housing units. It is important to keep these hurdles in view while designing any affordable housing project.

### **International Practices on Affordable Housing**

Several countries of the world including United States, United Kingdom, Australia, France, Spain, Canada, South Africa, Israel, India, New Zealand, Colombia, Malaysia, Netherlands and Italy have adopted affordable housing and inclusionary zoning policies (Calavita and Mallach 2010).

In the United States and United Kingdom, the developers of any new project and the local government negotiate in order to achieve the goals of affordable housing. These negotiations range from the imposition of 'development impact fee' to meet the cost of services required by new units, to reservation of a certain percentage of the newly built houses for affordable housing. In UK the town planning laws state the type, number of units and location of affordable housing and the financial contributions that the developer must make for the provision of infrastructure and services.

Australia has adopted a number of 'development contributions' that are imposed on new developments. This can be either contribution in kind (land given to public authorities by the

developer for developing infrastructure and public facilities), work-in-kind (developer develops infrastructure facilities which are surrendered to public authorities) and monetary charges (to be used by public authorities to acquire land or develop infrastructure at some other site). Canada focuses on private sector involvement in the provision of affordable housing. In Vancouver it is mandatory to reserve 20 percent of the houses in all major developments to be affordable units. The national law in Belgium mandates all cities to make 20 percent of their housing affordable. The Land Act of Spain, 2007 directs that at least 30 percent of the newly constructed houses must be affordable units. The Brazilian government has also made provisions of affordable housing to the low income groups. Depending on their monthly income each household has to contribute a certain percentage (ranging between 10 to 20 percent) of their income for access to these affordable houses. Bogota has undertaken projects integrating affordable housing and transit. This prompted the movement of poor people from slums and illegal settlements in the outskirts of the city to transit served affordable housing sites. This prevented the loss of time and productivity.

Ireland has launched rental housing schemes. The public authority draws up contracts with landlords to provide housing for a certain period of time and pays rent to the landlord. The tenant pays rent to the public authority and not the landlord. China and Germany have also undertaken massive rental housing projects.

## **Rental Housing**

Rental housing is extremely essential for a vibrant housing market. However, Indian housing market is mostly characterized by ownership tenure. Rental housing has been grossly neglected in India.

Rent control can damage the housing market. At a broader level, rent control has exacerbated the problem of inadequate affordable housing, immobility of tenants, and produced a mismatch between house prices and household incomes (Gandhi 2012).

Migrants form a major section of the urban population. A large number of workers come for working in a city either for a short span or in some particular season. Many migrants who come to city for job or education, generally, stay for less than five years. The city also attracts people from rural and semi-urban background. Such people come in search of jobs but eventually fail to find any. All these people do not want to own a house in the city. Rental housing can cater to their needs.

The share of rental housing in urban housing stock has declined over the years. It declined from 54 percent in 1961 to 27.5 percent in 2011 (Census of India 2011). This period has also witnessed an increase in the number of slum dwellers. Rental housing plays a major role in preventing the growth of slums. It can help poor migrants to find a place to live near their work places, and thus, their productivity can improve.

The Rent Control Laws prevailing in India play a critical role in preventing the emergence of formal rental housing. Shirish Patel writes that, residential construction for rental for the lower and middle income groups, stopped half a century ago, because of the Rent Act, and show no sign of revival (Patel 2005). The various impacts of Rent Control Laws are discussed below:

- Under the rent control laws, rents cannot exceed a particular level. This distorts the rental housing market. The situation worsens when gap between the actual market rent and the frozen rent increases. It also discourages the supply of new rental housing. The housing shortage coupled with increased demand provides room for informal practices, huge search costs, corruption, black money and inefficiencies.
- Land lords do not get appropriate returns on rent controlled properties. Thus, they have no incentive to undertake maintenance and repair work. This leads to a dismal state of rented properties. It is also difficult to find a buyer for rent-controlled properties in the event that the owner wants to sell the property.
- Rent control laws can also affect labour mobility and productivity.

The government needs to pay urgent attention to the availability of rental housing. A reformulation of rental laws which guarantee adequate returns to landlords along with securing tenant rights can boost the supply of rental housing units. Houses left vacant, abandoned or in dilapidated conditions can be brought under rental housing after renovation by incentivizing the owners. Single room hostels, dormitories, houses for families of various sizes can be constructed. A properly worked out model can ensure reduction of slums, security of tenure along with reducing the pressure on government to provide affordable housing on ownership basis.

## **Role of Public-Private Partnership (PPP)**

The provision of affordable housing to all can be accomplished better under a public-private partnership (PPP) framework. Private sector is considered to be more efficient in the management of construction risks and project delivery. PPP can

be instrumental in addressing the issues of land availability, funding, approval delays and affordability by the poor. It can play a significant role in housing market by bridging the gap between housing demand and supply. The PPP model has various advantages in the supply of affordable housing, some of which are discussed below:

- Land acquisition becomes faster and easier under the public sector. This ensures faster completion of project. Project cost can be reduced by avoiding schedule overruns.
- It is more effective in securing finances. Institutional lenders are prompted to provide easy loans due to Government guarantee.
- The affordability of the units can be improved due to some relaxation of stamp duty and development fees, along with tie-up with banking institutions.

Rajasthan has successfully implemented PPP models for providing affordable houses to the EWS and LIG. Similar attempts have been taken by Gujarat (under the Town Planning Scheme), Delhi and Vijayawada.

PPP framework needs to be strengthened to encourage the private sector involvement and ensure smooth functioning of the programme. Some of the steps that must be taken in this direction are furnished below:

- Affordable housing units can be built on Government land. This effectively reduces the need to acquire land and reduces the land cost. A transparent process must be adopted to distribute land among the private developers. Redevelopment and rehabilitation schemes of the government can substantially increase the availability of prime land. Timely approval can prevent delays and reduce costs.
- Builders can be provided incentives in the form of higher FSI, density bonuses, reduced setback and parking norms. This will also reduce the per flat land cost.
- Private developers should be allowed to undertake joint development of MIG, LIG and EWS flats. MIG flats can be sold at the market rates and the surplus can be used to subsidise the other sections.
- Subsidies should be provided for investment in R&D to find new low cost materials and technologies. Construction materials should be exempt from tax and duties or may be subject to a lower tax rate.
- Proper connectivity to the PPP project sites must be ensured. This will ensure that commuting costs do not offset the lower prices of affordable units. Focus should be on the construction of metro rail, inter-city highways etc.

Central government must provide increased support to state governments and ULBs to engage in PPP ventures. Effective project targeting, implementation and delivery should be the focus of PPP activities.

## **Directions for Reforms in India**

In the pursuit of housing all by 2022, the Government of India is working on a number of measures such as facilitating faster approvals, self-certification, lower interest rates etc. However, several concrete measures need to be taken in this direction.

It is necessary to ensure the availability of adequate funds throughout the project's life. A robust policy framework needs to be in place considering rising land and construction cost along with inadequate reach and availability of micro-finance options. Simplification of approval procedure will help to shorten the gestation period. Proper planning and utilization of land can be improved by updating land records using geographical information systems.

It is extremely important to explore the potential of private players in the provision of affordable housing. They are considered to be more efficient in managing construction risks and effective in project delivery. Incentives in the form of higher floor area ratio (ratio of built up area to total land area), relaxation in parking and set-back norms etc. can be provided for the timely completion of projects.

Most of the affordable housing units are built in the city outskirts. This can result in productivity loss due to higher hours of commuting to the place of work. Affordable housing projects should ideally be developed closer to commercial and industrial hubs. Projects integrating affordable housing, transit and employment opportunities are the need of the hour. Since, it is not possible to provide housing to all on ownership basis, it is important to develop rental housing projects.

Provision of demand side subsidies will not be effective unless matched by an increase in supply. Subsidies will be absorbed in higher prices if supply does not increase simultaneously. Thus, it is important to keep all the dimensions in view. Robust policies need to be formulated and executed with commitment and consistency.

## **Conclusion**

Generally, a new house is purchased out of the disposable surplus income. This disposable surplus income falls drastically for the lower income groups and is generally higher for the higher income sections. Thus, income and affordability have a

non-linear relationship. In other words, the lower income groups are more susceptible to lack of housing facilities. The number of slum dwellers and the trends in housing shortage among LIG and EWS bears testimony to this fact.

It is the responsibility of the government to ensure that all sections are provided appropriate housing at affordable prices. There are practical limitations in providing housing on ownership basis to all citizens and thus, the rental housing market should be developed and strengthened. Rental housing not only reduces the amount of capital required to ensure inclusive growth but also has less administrative cost.

The role of private players and the feasibility of PPP ventures must be explored and exploited. It is necessary to develop the unused and underused government land effectively. Several alternative ways to ensure reduction of cost and timely completion of affordable housing projects must be explored. Housing and transport form the major part of non-food expenditure of LIG and EWS. So, projects integrating both these aspects should be taken up. It is high time to bring into effect the policies to ensure 'housing for all'.

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# An Empirical Study on the Impact of Organizational Learning on Organizational Competency

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## Introduction

A major shift has taken place in the relative importance of factors of production. Earlier, the three main factors of production were land, labour and capital, however, intellectual labour has become by far the most important factor of production. Authors like Drucker (1969) & Handy (1989) have argued that people are the core assets of the organization. In an ever changing environment, it is very difficult to predict the future (DeGeus, 1988). In the background of continuous technological changes (Dodgson, 1993), organizational learning (OL) (Senge, 1990 & Pedler et al, 1991) has emerged as the intellectual capital of organizations (Kanter, 1989; Senge, 1990 & Appelbaum, 1997). It has manifested itself as one of the main sources of competitive advantage for organizations.

Organizational learning depends on a number of organizational conditions such as climate, culture, structure, methods of innovation and so forth. Many authors have opined that learning is the only sustainable competitive advantage (DeGeus, 1988 & Stata, 1989), since we cannot copy the learning process. It creates an organizational ability to respond quickly to the internal and external changes. Rapid technological changes demand a flexible and multi-skilled workforce. It has become essential for the individuals at all levels of organizational hierarchy to learn new and different ways of reacting to competitive pressures.

The development of the concept of organization competency is analyzed by various academicians and theorists from the organization capability to create and develop efficient systems and ways by which it is possible to not only attract, develop and retain best employees but also provide the organization with competitive edge over its competitors in terms of product, quality and technology development.

Organization competency (OC) is a combination of unique skills, assets and procedures, which provide the organization competitive capability and sustainable advantage (Tece,

1990). Organization competencies can also be explained as a system of effective interaction between technology and human resources practices (both formal and informal) (Drejer, 2000). Organization competencies can be used to denote organizational strengths or unique capabilities (Hoffman, 1999) required to sustain the deployment of resources in coordinated and sustained way to help an org, achieve its objectives (Sanchez, 2001). OC has two essential inputs from managers: the clarity of goals and objectives and coordinated use of resources to carry out actions achieving organization goals. Setting a threshold allows management of organizational competence within desired limits and provides a warning when a shortage of organizational competence puts the organization at risk (Stowell, 2013). Organizations try to achieve their objectives by developing, leveraging and building competencies.

Organization competency requires the organization to focus strategies to the external environment. The organization must allocate and utilize resources effectively and upgrade strategies to maintain its competency. An organization competency can be developed by coordination of internal skills, activities and resources with functional strategies to protect itself against competition focusing on the organization's internal and external environment (Hofer and Schendel, 1978).

In the last decade, a lot of researchers have concentrated on processes of learning within firms. These studies have been limited to firms in the advanced countries (Kogut and Zander, 1992 & Nonaka Takeuchi, 1995).

From the literature, knowledge acquisition is very much associated with organizational learning, leading to competence. According to Dunphy et al (1997), the learning, which takes place in an organization, is embodied in organizational competency. When a group or organization has learned something it develops a competence (capacity) to use continuously that learning to achieve purpose (outcomes). The actions are the manifestation of the competence, which the

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learning has created and made possible. So a learning organization is one, which develops and maintains competencies both to perform and to change the organization to maintain or improve performance. The relationship between competency and learning is reinforced by the definition of competency given by Prahalad and Hamel (1990). According to them competency is the collective learning in the organization especially how to coordinate diverse production skills and integrate multiple streams of technologies. The firm's capability to develop competencies depends upon firms learning capacity that is on firm's ability to acquire, create and disseminate new knowledge. In the book 'The competent organization' by Hodgkinson and Sparrow (2002) an entire chapter is on learning organization. According to them strategically competent organization is one that engages in processes of organizational learning.

### Need of the Study

There are many researchers like Pedler et al (1997), studying learning in organizations, but mostly it is concentrated in other countries. Researcher like Khandekar and Sharma (2005) have studied OL in India but no study has been conducted in India based on Learning characteristics and its relationship with competency. Hence this researcher found that the existing literature was short of empirical studies in the area of learning in India and the relationship between learning and competency, thereby providing the impetus for this study. This research work, which is conceptual and empirical in nature, has taken a step, and a significant one in the Indian context to fill the void.

### Objectives

- 1) Measure learning score LSA and OC in organizations from Manufacturing, Information Technology (IT) and Telecom sectors.
- 2) Examine whether the variance in the dimensions of OC can be explained by considering the dimensions of LSA as independent variable.

### Hypotheses

The following hypotheses were formulated:

**H1** - The dimensions of learning (LSA) will serve to significantly explain the variance in OC score.

**H2** -The dimensions of learning (LSA) will serve to significantly explain the variance in OC dimension 'Product Development Competency'.

**H3** - The dimensions of learning (LSA) will serve to significantly explain the variance in OC dimension 'Employee Development Competency'.

**H4** - The dimensions of learning (LSA) will serve to significantly explain the variance in OC dimension 'Quality & Technology Development Competency'.

### Methodology

This study was conducted in six organizations. All the organizations are situated within the geographical region of Chennai. As it was consented to keep the names of the participating organizations confidential, the organizations from the manufacturing sector are named as MAN 1 and MAN 2, the organizations from IT sector are named as IT 1 and IT 2 and from telecom sector as TEL 1 and TEL 2. MAN 1 is an Indian automobile industry with a major presence in India's commercial vehicle industry and MAN 2 is a Korean based Car manufacturing company with its plant in Chennai, which started in December; 1996. The organizations from IT sector were named as IT 1 and IT 2. IT 1 is an Indian software development firm, which is a global solutions specialist with a dedicated focus on the banking financial services and insurance vertical. IT 2 is a UK based \$800 million IT services and business process company. TEL 1 is an infocom company, which was commissioned in 2002. It built the backbone for a digital India – 60,000 kms of fiber optic backbone, crisscrossing the entire country. TEL 2 is a corporate group which is India's leading private sector, provider of telecommunications services with a strong customer base consisting of 7.14 million total customers, which constitute, 6.5 million mobile and 6,37,000 fixed line customers.

Stratified random Sampling was adopted with stratification based on functional areas, to select the respondents. The total sample size was 520.

### Instrument Used

Learning Company Questionnaire (LCQ) (Pedler et al, 1991) was used in this study for collecting data. It is based on 11 dimensions of learning: 1) Learning approach to strategy, 2) Participative policy making, 3) Informating, 4) Formative accounting and control, 5) Internal exchange, 6) Reward flexibility, 7) Enabling structures, 8) Boundary workers as environmental scanners, 9) Intercompany learning, 10) Learning climate and 11) Self-development opportunities for all.

Each dimension has two scores: a) Learning Score 'As it is' (LSA) which describes the present situation in the organization and (b) Learning Score 'as you would like it to be' (LSB) which describes the employees expectation about the learning situation in the organization and a preference about that

situation. The sum of the scores for the 11 learning dimensions for LSA and LSB yields the total LSA and total LSB respectively. The questionnaire consists of 55 items and adopts a seven-point rating scale anchored from 'never followed' to 'always followed' and the responses to items are scored from one to seven respectively. The  $\alpha$  scores for the LCQ scale and its sub scales in this study ranged from 0.84 to 0.98 for LSA.

Organization competency questionnaire developed by Chaston, Badges, Mangles and Smith (2001) was used for collecting the data. It measures the degree of an organization's ability to effectively manage the various aspects of internal operations. It has 25 items and a seven point response ranging from 'strongly agree' to 'strongly disagree'. Aggregate data collected from all the respondents from Manufacturing and IT sectors by

using organization competency questionnaire were factor analyzed to know its internal structure and the grouping of items. This analysis was conducted by using Principal Components method with Varimax rotation. The rotation revealed three factors with Eigen value greater than 1 explaining 59.98 % of the total variance. The analysis suggested dropping one item due to the loading value being below 0.5. The results of the subsequent factor analysis are shown in Table1. After factor analyses the three factors were named as Employee Development Competency (6 items, = .90), Product Development Competency (6 items, = .80) and Quality and Technology Development Competency (12 items, = .94). The composite organization competency index (24 items) showed =0.96.

**Table 1**  
**Factor Analysis – Rotated Factor Matrix for OCQ**

Item No. Ability to	Factor 1	Factor 2	Factor 3
Develop superior products	.20	.06	<b>.51</b>
Operate using internal profits	.47	.23	<b>.49</b>
Develop New products	.26	.15	<b>.80</b>
Increase product launches	.22	.27	<b>.76</b>
Reduce product development time	.25	.39	<b>.52</b>
Develop products to enter new market	.32	.38	<b>.54</b>
Structure organization	.45	<b>.52</b>	.32
Optimize work environment	.44	<b>.64</b>	.20
Appraise staff	.26	<b>.76</b>	.21
Provide employee development	.21	<b>.81</b>	.19
Optimize employee productivity	.36	<b>.73</b>	.18
Finding new ways to enhance productivity	.41	<b>.64</b>	.25
Prepare plan	<b>.55</b>	.33	.39
Introduce new technology	<b>.55</b>	.29	.35
Upgrade assets to improve quality	<b>.63</b>	.19	.24
Measure customer expectations	<b>.68</b>	.29	.26
Use customers to define quality standards	<b>.71</b>	.25	.26
Identify quality variance	<b>.70</b>	.28	.22
Improve quality	<b>.71</b>	.22	.34
Use information to optimize decisions	<b>.67</b>	.35	.18
Create control systems	<b>.66</b>	.36	.26
Rapidly identify niche market change	<b>.57</b>	.31	.35
Use IT to acquire data	<b>.66</b>	.34	.25
Incorporate advances in IT into existing information system	<b>.69</b>	.32	.23
Eigen Value	12.10	1.22	1.08
Cum % variance.	50.42	55.51	59.98

### Analysis & Results

A step-wise Multiple Regression Analysis was conducted by taking Organization Competency Score as dependent variable and a learning approach to strategy LSA, participative policy making LSA, informing LSA, formative accounting and control

LSA, internal exchange LSA, reward flexibility LSA, enabling structures LSA, boundary workers as environmental scanners LSA, intercompany learning LSA, a learning climate LSA, self development opportunities LSA for all as independent variables.

**Table 2: Results of Step-wise Multiple Regression Analysis  
Independent Variables – Dimensions of Learning Score ‘As it is’  
Dependent Variable: Organization Competency**

Organization	Step No.	Dimension entered (Independent Variable)	Adjusted R <sup>2</sup> Value	F Value
MAN 1	1	Informing LSA	.338	52.116**
	2	Internal exchange LSA	.381	7.882**
MAN 2	1	Self development opportunity LSA	.285	38.858**
TEL 1	1	Internal exchange LSA	.455	57.677**
	2	Inter company learning LSA	.557	16.503**
	3	Boundary workers LSA	.583	5.056**
TEL 2	1	Learning Approach LSA	.508	94.950**
	2	Formative Accounting LSA	.532	5.564**
IT 1	1	Self development opportunity LSA	.626	138.283**
	2	Inter company learning LSA	.690	17.804**
	3	Boundary workers LSA	.740	16.258**
	4	Learning climate LSA	.765	9.380**
IT 2	1	Enabling structures LSA	.108	10.451**
	2	Learning climate LSA	.199	9.708**
	3	Learning approach LSA	.252	6.431*

Significant at \*\* p<0.01, p<0.05

As shown in table 2 in MANI Informing LSA and Internal exchange LSA emerged as significant predictors of OCS and duly explained 38.1 % of variance. In MAN2 Self-development opportunities for all LSA alone explained 28.5% of variance. Internal exchange LSA, Inter company learning LSA and Boundary workers LSA of TELL explained 58.3% of variance. Learning approach to strategy LSA and Formative accounting & control LSA together explain 53.2% of variance in TEL2. The

dimensions Self-development opportunities for all LSA, Intercompany learning LSA, Boundary workers as environmental scanners LSA and A learning climate LSA that combined explained 76.5% of variance in ITI. In IT2 the dimensions Enabling structures LSA, Learning climate LSA and Learning approach to strategy LSA combined explained 25.2% of variance. Hence the following hypothesis was accepted.

**Table 3: Results of Step-wise Multiple Regression Analysis  
Independent Variables – Dimensions of Learning Score ‘As it is’  
Dependent Variable: Product Development Competency**

Organization	Step No.	Dimension entered (Independent Variable)	Adjusted R <sup>2</sup> Value	F Value
MAN 1	1	Informing	.300	43.876**
	2	Internal exchange	.327	5.013*
MAN 2	1	Internal exchange	.205	25.536**
TEL 1	1	Learning Approach	.031	3.536
	2	Reward Flexibility	.128	9.563**
	3	Enabling Structures	.195	7.258**
	4	Learning Climate	.299	6.439*
TEL 2	1	Self development opportunity	.404	56.534**
	2	Boundary workers	.447	7.254**
	3	Internal Exchange	.486	7.134**
IT 1	1	Self development opportunity	.310	41.850**
	2	Participate Policy Making	.336	4.557*
IT 2	1	Boundary workers	.425	51.355*
	2	Internal Exchange	.497	10.557**

Significant at \*\* p<0.01, p<0.05

As shown in table 3 in MAN 1, Informing LSA and Internal exchange LSA duly explained 32.7% of variance in Product development competency. In MAN2, Internal exchange alone explained 20.5% of variance. The dimensions Learning approach to strategy LSA, Reward flexibility LSA, Enabling structures LSA and Learning climate LSA combined explain 29.9% of variance of Product development competency in TEL 1. Self development opportunities for all LSA, Boundary workers as environmental scanners LSA and Internal

exchange that combined explained 76.5% of variance of Product development competency in TEL2. Self development opportunities for all LSA and Participative Policy making LSA duly explained 33.6% of variance of Product development competency. Boundary workers as environmental scanners LSA and Internal exchange jointly explained 49.7% of variance of Product development competency, Hence the following hypothesis was accepted.

**Table 4: Results of Step-wise Multiple Regression Analysis  
Independent Variables – Dimensions of Learning Score 'As it is'  
Dependent Variable: Employee Development Competency**

Organization	Step No.	Dimension entered (Independent Variable)	Adjusted R <sup>2</sup> Value	F Value
MAN 1	1	Internal exchange	.296	43.009**
	2	Enabling structures	.334	6.678*
MAN 2	1	Informating	.121	14.018**
TEL 1	1	Enabling Structures	.160	15.873**
	2	Learning Climate	.270	12.566**
	3	Learning Approach	.327	7.400**
TEL 2	1	Boundary Workers	.617	133.073**
	2	Inter Company Learning	.663	12.085**
	3	Participative Policy Making	.681	5.387*
	4	Internal Exchange	.729	15.244**
IT 1	1	Informating	.378	56.250**
IT 2	1	Internal Exchange	.426	51.519**
	2	Inter Company learning	.509	12.309**

Significant at \*\* p<0.01, p<0.05

As shown in table 4 in MAN 1, Internal exchange LSA and Enabling structures LSA duly explained 33.4% of variance in Employee development competency. In MAN2, Informating LSA alone explained 12.1 % of variance. The dimensions Enabling structures LSA, Learning climate LSA and Learning approach LSA combined explain 32.7% of variance of Employee development competency in TEL1. Boundary workers as environmental scanners LSA? Intercompany learning LSA,

Participative policy making LSA and Internal exchange were the dimensions that combined explained 72.9% of variance of Employee development competency in TEL2. In IT1, Informating alone explained 37.8% of variance. In IT2, Internal exchange LSA and Intercompany learning LSA duly explained 50.9% of variance in Employee development competency. Hence the following hypothesis was accepted.

**Table 5: Results of Step-wise Multiple Regression Analysis  
Independent Variables – Dimensions of Learning Score 'As it is'  
Dependent Variable: Quality & Technology Development Competency**

Organization	Step No.	Dimension entered (Independent Variable)	Adjusted R <sup>2</sup> Value	F Value
MAN 1	1	Informating	.288	41.506**
	2	Boundary Workers	.329	7.005**
MAN 2	1	Self Development Opportunity	.283	38.408**
	2	Enabling Structures	.313	5.151*
	3	Reward Flexibility	.353	6.760*
	4	Informating	.378	4.643*
TEL 1	1	Enabling Structures	.092	8.947**
	2	Learning Climate	.165	7.702**
	3	Learning Approach	.198	4.163*
TEL 2	1	Learning Approach	.534	105.268**
IT 1	1	Self Development Opportunity	.612	130.136**
	2	Inter Company learning	.690	21.598**
	3	Learning Climate	.712	6.987*
IT 2	1	Boundary Workers	.421	50.400**
	2	Internal Exchange	.511	13.285**
	3	Learning Climate	.540	5.297*

Significant at \*\* p<0.01, p<0.05

As shown in table 5 In MAN 1, Informating LSA and Boundary workers as environmental scanners LSA emerged as dimensions explaining 32.9% of variance in Quality and Technology development competency. The dimensions Self-development opportunities for all LSA, Enabling structures LSA Reward flexibility LSA and Informating LSA combined explain 37.8% of variance of Quality and technology development competency in MAN2. Enabling structures LSA, Learning climate LSA, and Learning approach to strategy LSA combined explained 19.8% of variance of Quality and technology development competency in TELL In TEL2, Learning approach

to strategy LSA alone came out as dimension that explained 53.4% of variance. The dimensions Self-development opportunities for all LSA, Intercompany learning LSA and Learning climate LSA combined explain 71.2% of variance of Quality and technology development competency in IT1. Boundary workers as environmental scanners LSA, Internal exchange LSA, and Learning climate LSA were the dimensions that combined explained 54% of variance of Quality and technology development competency in IT2. Hence the following hypothesis was accepted.

## Influence of Learning on Organization Competency (OC)

Table 6  
Summary of the results of Multiple Regression Analyses

Dependent Variable	INDEPENDENT VARIABLES LEARNING LSA (No. of occasion in which they emerge as predictors)											
		Participative Policy Making	Informating	Formative Accounting and Control	Internal Exchange	Reward Flexibility	Enabling Structures	Boundary Workers as Environment Scanners	Intercompany Learning	Learning Climate	Self Development Opportunities for all	Total No. of Occasions
Organization Competency	2	-	1	1	2	-	1	2	2	2	2	15
Product Development Competency	1	1	1	-	4	1	1	2	-	1	2	14
Employee Development Competency	1	1	2	-	3	-	2	1	2	1	-	13
Quality & Technology Development Competency	2	-	2	-	1	1	2	2	1	3	2	16
Total No. of Occasions	6	2	6	1	10	2	6	7	5	7	6	58

Table 6 reveals the emergence of 'Internal exchange' as the dimension influencing organization competency the most. This implies that if the departments and internal units in an organizations exchange information on expectations and give feedback on goods and services received, it helps in improving organization competency. So organizations should strive for more interaction and communication between various departments. The other significant dimensions of learning explaining the variance in OC were 'Boundary workers as environmental scanners' and 'A learning climate'. It can be interpreted that if the employees of the organizations are involved in scanning the environment for important data, it has a positive influence on the organization competency. The climate, which fosters learning, also contributes towards organizations competency and its dimensions. 'Internal exchange' emerged as the most significant dimension influencing Product development and Employee development competency while 'A learning climate' explained the variance in Quality and Technology development competency. Quality & Technology development competency had been explained as the dependent variable of learning on 16 occasions. Product development competency and Employee development competency emerged as the next dependent variables of learning, as they were explained on 14 and 13 number of occasions respectively. There were totally 15 occasions on which organization competency was influenced by learning.

### Findings

The study in the Manufacturing, Telecom and IT sector reveals that higher the learning, higher is the organization competency; the dimensions of learning have emerged as significant in explaining the variance of organization competency; 'Learning Approach to Strategy, Informating, Formative Accounting and Control, Internal Exchange, Enabling Structures, Boundary Workers as Environmental Scanners, Intercompany Learning, Learning Climate and Self Development Opportunities for all' have come out as the dimensions of learning organization explaining the variance of organization competency.

### Conclusion

The phenomenon of learning economy has replaced the industrial economy throughout the world. Organizations cannot afford to be complacent with their learning mechanisms; they need to introspect and work to become learning organizations by appropriately changing their strategies, structures and systems so as to promote organizational learning. The results of this study showed that there is positive relationship between learning and competency, which ratifies theoretical underpinnings and shows another reason for the organizations to work towards becoming a learning organization.

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# An analysis of International Arms Transfer in Contemporary World

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## Introduction

Arms trade is highly controversial and raises difficult policy issues. The controversies tend to concentrate on the moral, military and political dimensions of arms exports decision. The arms have been transferred worldwide throughout the human history, but after the Cold War, arms transfer has been taking place in a new international system and there are drastic structural changes in international arms market. The compositions and directions of arms trade in international market depend on various factors. Arms trade is influenced by process of arms acquisition, which is further influenced by various factors like perceptions of internal and external threats to national security, need to replace or upgrade military inventories, development stage of domestic defence industry, financial capability of arms importers, military alliances and agreements among countries, policy of disarmament and armament, demonstration of international status and system of arms trade etc.

The injudicious arms transfer leads to the ready availability of weapons and ammunition in all parts of the world, which leads to human suffering, political repression, crime and terror among civilian populations. Illegal and irresponsible arms transfers can threaten an entire region, enable violations of arms prohibition policy and contribute to human rights abuses and investment for development is discouraged as a result of which development is disrupted in all over the world in general

and countries experiencing conflict and high levels of violence in particular. In order to control and create more transparency in arms transfer many steps have been taken by international level originations such as United Nations Register of Conventional Arms (1991) and Arms Trade Treaty (2013) by the General Assembly of the United Nations. Arms Trade Treaty sets robust international standards to help guiding nations in deciding whether or not to authorise arms transfers. In fact, it provides cooperation and assistance to help countries develop adequate regulatory systems and safe weapons accumulation. The analyses of arms transfer have been suffering some conceptual and practical problems such as there is no globally agreed definition of arms and dual-use-goods. There is no common agreement on what types of activities constitute the arms trade like arms leased to other countries, gifts and donations, the transfer of technology to produces arms and military equipment and upgrades and services related to the transfer of arms and military equipments. Moreover, the lack of openness and transparency by many suppliers and recipients regarding the value and volume of their arms exports and imports makes it difficult to collect accurate data of arms transfers.

## Research Methodology

The basic objective of this paper is to study some important aspects of international arms trade in contemporary world. Two main sources have traditionally been used to study the arms trade, namely, SIPRI and World Military Expenditure and the

1. The Constitutional Law of India By- Dr. J.N. Pandey, Published By- Central Law Agency, 49th Edition-2012

Arms Trade (WMEAT), previously provided by the US Arms Control and Disarmament Agency, now by the Bureau of Verification and Compliance of the State Department. In order to achieve the objective of the study, we have used the data on arms transfer from the various issues of Year book of Stockholm International Peace Research Institute (SIPRI). SIPRI provides yearly data only on the volume of transfers of major conventional weapons systems, not including transfers of small arms. SIPRI uses the term “arms transfer” rather than “arms trade” or “arms sale”. Thus, SIPRI’s definition of “arms transfer” includes sales, manufacturing licences, aid, gifts and most loans or leases (Table 1). The transfer’s weapons must have a military purpose; the recipient must be the armed forces or paramilitary forces or intelligence agency or another country, a non-state armed group, or an international organisation. SIPRI statistical data on arms transfers relates to actual deliveries of major

conventional weapons. It has developed a unique system to measure the volume of international transfers of major conventional weapons using a common unit, the Trend-Indicator Value (TIV). The TIV is intended to represent the transfer of military resources. Each weapon has its own specific TIV. It calculates the volume of transfers by multiplying the weapons-specific TIV with the number of weapons delivered in a given year. TIV figures do not represent financial values for weapon transfers or sales prices of arms transfers; they are an indicator of the volume of transfers. Therefore, TIV figures should not be cited directly, compared with economic statistics such as GDP, military expenditure, export and import. They are best used as the raw data for calculating trends in international arms transfers over period of time, global percentage for suppliers and recipients, and percentage for the volume for transfers to or from particular state.

**The SIPRI Arms Transfers Database includes following Major Weapons**

Sr. No.	Major Weapons
A	Most aircraft(including unmanned)
B	Most armoured vehicles
C	Artillery over 100 millimetres in calibre
D	Sensors(radars, sonars and many passive electronic sensors)
E	Air defence missile systems and larger air defence gun
F	Guided missiles, torpedoes, bombs and shells
G	Most ships
H	Engines for combat -capable aircraft and other larger aircraft, for combat ships and larger support ships and for armoured vehicles,
I	Most gun or missile-armed turrets for armoured vehicles
J	Reconnaissance satellites
K	Air refuelling systems
L	Naval gun, missile launch systems and anti-submarine weapons

*Note: In case where a sensor, engine, turret, refuelling system or naval gun or other system (items d, h, i, k, and l) is fitted on a platform (vehicle, aircraft or ship), the transfer only appears as a separate entry in the database if the items comes from a different supplier from that of the platform.*

**Review of literature**

Carus (1994) considers the possibility that revolutionary changes in the technology of war may lead to a fundamental transformation of the international arms trade, perhaps as significant, than the structural shock associated with the end of the cold war. The new technology of war could be more information-intensive than previously imagined, relying on advanced sensor communications and long range precision guided weapons etc. Anderton (1995) found that the end of the cold war has increased the relative importance of economic causes and consequences of arm transfer and there is surprisingly little theoretical and empirical development of the economics of the arm trade. The central problem of the arms trade literature, for both economists and geopolitical scientists, is how to go beyond the proliferation of policy position articles

and descriptive studies to a more solid base of theoretical and empirical models. Paul Levine et al.(1997) study the structured economic description of the evolution of the international arms market in terms of the factors that influence demand and supply and thus prices and quantities. They reviewed the policy issues faced by European Union members in particular, whether a common control regime is needed to harmonize their regulation of arms exports.

Bajusz and louscher (1998) identify the following causes of arm trade: maintenance of indigenous defense industries, economics of scale, R&D cost savings, defense industry employment, increased trade balance, access to hard currency, foreign policy influence over recipients, maintenance of local power balances, promotion of internal security of recipients, stronger allies, and inter-operability of weapons between allies.

While it is fairly easy to list causes of the arm trade, it is much more difficult to develop theoretical and empirical frameworks which discern the relative importance of causal variables in an economic and political context. There has been relatively little systematic cumulative theoretical and empirical work on the causes and consequences of arms trade. Dunne et al. (2003) shows that although at the end of the Cold War the international arms industry was relatively unconcentrated, concentration increased markedly in the 1990-1998 period, although this is proven not to be associated with increases in the average size of firms.

Maria DC (2007) explains the main characteristics and problems involved in the study of the arms trade, product definition and data, strategic aspects of the arms trade and regulation by using the latest theoretical and empirical literature on arms trade. Smith and Tasiran (2005) provide econometric estimates of the demand for arms imports as a function of the domestic military expenditure (a proxy for the threat), a measure of price and the income of a country. On these estimates, demand is sensitive to price. For a constant threat, a one percent increase in price causes a roughly one percent fall in the quantity of arms imports demanded. Holtom, Paul, and Mark Bromley (2010) found that the volume of international arms transfers in the post-World War II period peaked in 1982. Following the end of the cold war, there was a steady decline in global arms transfers. They reached their lowest point in 2002, when transfers amounted to only 38 percent of their cold war high. One of the most marked aspects of the international arms trade has been its dominance by five suppliers namely Soviet Union, United States, France, United Kingdom and federal Republic of Germany, all these five accounted for 84 percent of all exports during the period of 1980-84.

Jeff Abramson (2016) found the United States remains the world's largest suppliers of major conventional weapons systems and increasing the value of arms agreements. The United States concluded \$ 36.2 billion in arms transfer agreements worldwide in 2014. India in the Asian region is the second-largest developing world arms market, accounting for nearly 30 percent of the developing world's arms agreement from 2011 to 2014. Hugo Meijer et al.(2017) in their study makes two original contributions, first, based on elite interviews, diplomatic cables and government documents it offers the comprehensive cross-national comparison of the USA, British, French and Russian arms transfer policies towards China since the end of the cold war. Second, it proposes an explanatory framework for analysing international arms transfers by drawing on neoclassical realism. On this basis, it develops hypotheses on the interplay of international and domestic factors in shaping states, arms export policy. It also

provides more comprehensive understanding of the dynamics shaping China's military modernisation.

### **Demand for Arms Imports and Supply of Arms Exports**

Each and every country of the world is always making constant efforts to make their defence system more strong and efficient, so that it's internal and external security will not be hampered and simultaneously its military capability will enhance. For this they need various types of desired arms and related services. Arms are not homogenous; it can be divided into five categories namely Weapons of Mass Destruction, Major/ Conventional Weapons Systems, Light Weapons, Dual-use-Equipment and Military Services. Arms can be acquired either from imports or domestically produced with or without the collaboration of other countries under licence system. If a country wants to produce domestically, than precondition is a well built Defence Industrial Base, technological and financial capability etc. On the other side if they want arms imports from the other countries it depends on various factors like – finance for desired arms imports, future of arms related technology transfer, agreements of arms support system and maintenance, timely and easily availability of the desired arms, relationship between suppliers and recipients and functioning of arms market. Supply of arms exports is also influenced by various factors like - Defence Industrial Base of exporters, marketable surplus of arms production, policy of disarmament, facility provided by arms suppliers, exporter's specialisation in particular arms and arms market.

Therefore, demand for arms imports and supply of arms exports is determined by various factors like – pattern and composition of military expenditure of importers and exporters, regional and global conflict, terrorism, policy of disarmament or armament, arms races, participation of defence sector in business and trade, R&D in industrial production, government policy for defence production, threat for internal and external security, world's arms market and military alliances and agreement among different countries/organisations.

### **The Global Arms Transfers Trend**

The volume of international transfers of major weapons in 2012-16 was 8.4 percent higher than 2007-11 and in 2011-15 it was 14 percent higher than in 2006-07.(SIPRI 2016). From 2004 to 2014, the global annual value of international arms transfer deliveries appears to have averaged about 151 billion US dollars (WMEAT 2016).

## I Major Arms Exporters

The top ten largest exporters of major conventional weapons and their main clients during 2007-11 and 2012-16 have been presented in table 2. All these ten countries accounted for 88.8 percent of the total volume of arms export in 2012-16 and 87.4 percent in 2007-11. The USA, Russia, China, United Kingdom, Italy and Ukraine arms exports in 2012-16 were higher than in 2007-11 with respective increase of 21 percent, 4.7 percent, 74 percent, 27 percent, 22 percent, and 49 percent while during the same period Germany and France arms export decreased by 36 and 5 percent respectively. The government of these major arms exporters are actively engaged in assisting the export efforts of their domestic arms industries in the competitive international arms market. It is evident from the table 2 that among the top ten largest arms exports Russia, Israel, Ukraine, USA and France military expenditure as share of their GDP in 2015 were 5.4 percent, 5.4 percent, 4 percent, 3.3 percent and 2.1 percent respectively.

**(1) USA:** The USA was the largest exporter of major weapons in the period 2012-16, with 33 percent of total global arms export compared with 30 percent in 2007-11. The USA delivered major weapons to at least 100 countries in 2012-16. The largest recipients was Saudi Arabia accounting for 13 percent of USA arms exports and followed by UAE and Turkey with 8.7 percent and 6.9 percent respectively. The flow of weapons from USA to Saudi Arabia is likely to remain high due to deliveries of 154 F-15SA combat aircraft which began in 2016. At the regional level the Middle East was the main destination for USA weapons, accounting for 41 percent of USA arms exports and followed by Asia and Oceania received 40 percent and 9.9 percent respectively. The war against the Islamic State in Iraq and Syria was a major reason behind USA military aid and arms sales to the Middle East. There is no doubt that the USA will maintain its positions as the largest exporter in the years to come. It has well-established relations with many major clients and potential clients. Arms exports are an important part of USA security policy. There are numerous orders in place for major weapons particularly for combat aircraft (F-35 and F-15SA), which account for a substantial part of the volume of USA arms exports.

**(2) Russia:** The Russia's exports of major weapons increased by 4.7 percent between 2007-11 and 2012-16. While its share of total global exports decreased from 24 percent to 23 percent. At the regional level Asia and Oceania accounted for 68 percent of Russian arms exports in 2012-16, Africa for 12 percent, the Middle East for 8.1 percent and Europe for 5.9 percent. Russia exported weapons to 50 countries during 2012-16, but its exports were highly concentrated, with just three main clients:

India (38 percent), China (11 percent) and Viet Nam (11 percent). India has been the main recipient of Russian weapons, in 2012-16 Russia supplied 68 percent of India's arms imports. India is Russia's leading client not only in terms of export volumes but also in terms of the financial value of the arms transfer deals. Russian arms exports to China have been in decline for several years as China's domestic arms industries are increasingly able to meet its requirements. As was the case of USA, Russia's main export category was aircraft, which accounted for 44 percent of total Russian arms exports in 2011-15.

**(3) China:** China's exports of major weapons increased by 74 percent between 2007-11 and 2012-16. While, China's share of global arms export rose from 3.8 to 6.2 percent. At the regional level, the majority of Chinese export went to Asia and Oceania (71 percent), followed by Africa (22 percent) and the Middle East (1.7 percent). China exported major arms to 44 countries during the period 2012-16. Pakistan (35 percent) was the main recipient of Chinese arms exports and followed by Bangladesh (18 percent) and Myanmar (10 percent). All these three countries have a long history of purchasing Chinese weapons. India considers China a major rival and the flow of Chinese arms to these neighbouring countries has raised concerns in India. The major arms importers, such as India, Turkey and Saudi Arabia will not or hesitant to import Chinese arms for political reasons. Turkey cancelled an advanced negotiation with China on "long-range air defence system" in 2015 due to pressure from USA and NATO countries.

**(4) France:** France was the fourth largest exporter of major weapons in 2012-16, with 5 percent lower than in 2007-11. While its share of total global exports decreased from 6.9 percent to 6.0 percent. The fall in French arms exports was mainly due to a temporary gap in major orders for arms. France's involvement in several military operations overseas and hard national economic conditions over the last few years have limited growth in France's military procurement funding. The main recipients were Egypt (19 percent), China (11 percent) and UAE (9.1 percent). A total of 38 percent of French arms export went to countries in the Middle East, 29 percent to Asia and Oceania, 11 percent to Americas, 9.2 percent to Africa and 12.8 percent to the other countries in Europe.

**(5) Germany:** Germany's exports of major arms decreased by 36 percent between 2007-11 and 2012-16, and its share of the total global exports decreased from 9.4 percent to 5.6 percent. Germany was the third largest arms exporters in 2007-11. Germany delivered major arms to 60 countries in 2012-16. The main recipients were South Korea (13 percent), Greece (12 percent) and USA (9.7 percent). Germany's share in total global exports was 5.6 percent in 2012-16 as compared to 9.4 percent

in 2017-11, in 2017-11 it was the third largest arms exporters. A total of 28 percent of German arms exports went to other countries of Europe, 24 percent to countries of Asia and

Oceania, 23 percent to the Middle East, 16 percent to the Americas and 8.9 percent to Africa. Germany's main export category were ships, submarines and armoured vehicles

**Table -2**  
**The Top Ten Largest Exporters of Major Weapons and Their Main Clients, 2012-16**

Sr. No.	Exporters	Share of arms exports (%)		Percentage change from 2007-11 to 2012-16*	Main clients (share of exporter's total export, %) 2012-16			Military Expenditure as Share of GDP (%) in 2015
		2012-16	2007-11		First	Second	Third	
1	United State of America	33	30	21	Saudi Arabia (13)	UAE (8.7)	Turkey (6.9)	3.3
2	Russia	23	24	4.7	India (38)	Viet Nam (11)	China (11)	5.4
3	China	6.2	3.8	74	Pakistan (35)	Bangladesh (18)	Myanmar (10)	1.9
4	France	6.0	6.9	-5.0	Egypt (19)	China (11)	UAE (9.1)	2.1
5	Germany	5.6	9.4	-36	South Korea (13)	Greece (12)	USA (9.7)	1.2
6	United Kingdom	4.6	3.9	27	Saudi Arabia (48)	India (11)	Indonesia (9.0)	2
7	Spain	2.8	2.9	2.9	Australia (27)	Saudi Arabia (12)	Turkey(11)	1.2
8	Italy	2.7	2.4	22	Turkey (14)	UAE (11)	Algeria (8.0)	1.3
9	Ukraine	2.6	1.9	49	China (28)	Russia (17)	Thailand (8.5)	4.0
10	Israel	2.3	2.2	13	India (41)	Azerbaijan (13)	USA (5.9)	5.4

Note: \*Figures show the change in volume of the total arms exports per exporter between the two periods.

@ figures are estimated

Source: (i) Trends in International Arms Transfers, 2016, SIPRI Fact Sheet, February 2017.

(ii) SIPRI Year Book 2016, Armaments, Disarmament and International Security, Oxford University Press, United Kingdom.

## Major Arms Importers

The top ten largest importers of major conventional weapons and their main suppliers during 2007-11 and 2012-16 have been presented in table 3. All these ten countries accounted for 50 percent of the total volume of arms import in 2012-16 and only 38.9 percent in 2007-11. The India, Saudi Arabia, UAE, , Algeria, Turkey, Iraq and Viet Nam arms imports in 2012-16 were higher than in 2007-11 with respective increase of 43 percent, 212 percent, 63 percent, 4.7 percent, 42 percent, 123 percent, and

202 percent while during the same period China, Australia and Pakistan arms import decreased by 11 percent, 6.8 percent and 28 percent respectively. At the regional level, Asia and Oceania accounted for 43 percent of import in 2012-16, followed by the Middle East (29 percent), Europe (11percent), the Americas (8.6 percent) and Africa (8.1 percent). It is clear from the table 3 that among the top ten largest arms importers Saudi Arabia, Iraq, Algeria, UAE and Pakistan military expenditure as share of their GDP in 2015 were 13.7 percent, 9.1 percent 6.2 percent 5.7 percent and 3.4 percent respectively.

**(1) India:** India is the largest importers of major arms in 2012-16 with 13 percent of the total global import. India's import rose 43 percent between 2007-11 and 2012-16. India's imports in the most recent period were far greater than those of its regional rivals, China and Pakistan. In 2012-16 Russia supplied 68 percent of India's arms imports followed by USA (14 percent) and Israel (7.2percent). Further, based on the existing orders and weapons, Russia will remain certainly the main supplier of major arms to India in future. However, due to several major orders, India expects increasing arms deliveries from France, USA, South Korea and Spain. All these countries recently became the suppliers of major weapons to India. The main reason for India's high level of imports is the failure of its state-owned industry to consistently produce indigenously designed weapons that are capable of becoming real alternatives to the equivalent designs from other countries. In addition Indian defence industry is suffering with the problems of increasing cost, delays in production, quality of production and procurement system is slow and inefficient.

**(2) Saudi Arabia, UAE, and Algeria:** Saudi Arabia is the second largest importer of major weapons in 2012-16, with 8.2 percent of total global import. Its imports rose 212 percent between 2007-11 and 2012-16 and the main suppliers are USA (52

percent), UK (27 percent) and Spain (4.2 percent). UAE is the third largest arms importers with share of 4.6 percent in 2012-16 and its import increased 63 percent from 2007-11 to 2012-16. The main suppliers of UAE are USA (62 percent) followed by France (12 percent) and Italy (6.5percent). Algeria's arms imports increased by 4.7 percent in 2012-16 compared with 2007-11. Russia accounted for 60 percent of Algeria arms imports, China for 15 percent and Germany for 12 percent.

**(3) China:** China was the largest importer of major arms by a wide margin in the early 2000s, but currently it dropped to fourth place in 2012-16. China is increasingly capable of producing its own advanced weapons and has become less dependent on arms imports, which decreased by 11 percent between 2007-11 and 2012-16. China remains partly dependent on imports for some key weapons and components, including large transport aircraft and helicopters, engines for aircraft, vehicles and ships. Engines accounted for 30 percent of China's imports in 2012-16. China believes that he will achieve crucial technology from the imported weapons. China's largest supplier was Russia which accounted for 57 percent of Chinese imports followed by Ukraine (16 percent) and France (15 percent).

**Table -3**  
**The Top Ten Largest Importers of Major Weapons and Their Main Suppliers, 2012-16**

Sr. No.	Importers	Share of arms imports (%)		Percentage change from 2007-11 to 2012-16*	Main Suppliers ( share of importer's total import, %) 2012-16			Military Expenditure as Share of GDP (%) in 2015
		2012-16	2007-11		First	Second	Third	
1	India	13	9.7	43	Russia(68)	USA(14)	Israel(7.2)	2.3
2	Saudi Arabia	8.2	2.9	212	USA(52)	UK(27)	Spain(4.2)	13.7
3	UAE	4.6	3.1	63	USA(62)	France(12)	Italy(6.5)	5.7
4	China	4.5	5.5	-11	Russia(57)	Ukraine(16)	France(15)	1.9
5	Algeria	3.7	3.9	4.7	Russia(60)	China(15)	Germany(12)	6.2
6	Turkey	3.3	2.5	42	USA(63)	Italy(12)	Spain(9.3)	2.1
7	Australia	3.3	3.8	-6.8	USA(60)	Spain(23)	France(8.2)	1.9
8	Iraq	3.2	1.6	123	USA(56)	Russia(23)	South Korea(9.3)	9.1
9	Pakistan	3.2	4.8	-28	China(68)	USA(16)	Italy(3.8)	3.4
10	Viet Nam	3.0	1.1	202	Russia(88)	Belarus(3.5)	Ukraine(2.8)	2.3

Note: \*Figures show the change in volume of the total arms importers per importer between the two periods.  
@ figures are estimated

Source: (i) Trends in International Arms Transfers, 2016, SIPRI Fact Sheet, February 2017.

(ii) SIPRI Year Book 2016, Armaments, Disarmament and International Security, Oxford University Press, United Kingdom.

## Conclusion

Every nation has the right and need to ensure its internal and external security, for this they want to establish an efficient defence system and it required various types of weapons. Moreover, in the contemporary world due to arms race, rising conflicts and violence and advancement in defence technology, the demand for advance arms is continuously going to be increased. If a nation is incapable to produce required weapons they have to import the same from other countries. On the other side, if some countries have well established defence industries and they produce marketable defence weapons they compel the other countries of the world to purchase weapons from them and simultaneously creating circumstances in the world in which demand for weapons is continuously going to be increased. Currently, country using weapons sales as instatement of foreign policy in the international system. Increasing arms transfer in the world is not favourable for arms exporters as well as the arms importers countries. It means that military expenditure in all arms exporters and arms importers countries is extremely high. Consequently, excessive military expenditure reflects corruption, mismanagement or improper planning, which can result in a loss of public resources that could otherwise be invested in social and human development. The illegal and irresponsible arms transfers is a major cause of human right abuses, increasing internal and external conflicts, insecurity, terrorism, corruption, bribery and less allocation of fund for other sectors of the economy. Further, the recipient countries, especially those perceiving a military threat and having no substantial arms production capability of their own, are likely to come under some influence by their major arms suppliers and even more so if they have only one major supplier. There are many push and pull factor are involved in arms transfer among different countries. Hence, Demand for arms imports and supply of arms exports is determined by various factors. The structure of international system is a major determinant of compositions and directions of arms transfer. The volume of transfers of major weapons in 2012-16 was 8.4 percent higher than in 2007-11. The five biggest exporters in 2012-16 were the United States, Russia, China, France and Germany and they accounted for 73.8 percent of the total volume of arms exports. On the other side the five biggest importers were India, Saudi Arabia, The United Arab Emirates, China and Algeria, and they received 34 percent of all arms imports.

In order to reduce the adverse impact of increasing military expenditure and arms transfer in the world, it is essential to bring more transparency in arms transfer. Presently, many institutions and organizations are established and programmes are in progress for controlling and regulation of the arms

transfer. If we succeed in controlling arms transfers and diverting additional or surplus military expenditure for economic and social development of human being than we will surely achieve goals of sustainable development within time otherwise it is impossible.

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# Performance of the Micro, Small & Medium Enterprises (MSMEs) Manufacturing Sector in Select States in India: The Concept of MSME Manufacturing Business Facilitator (MSME-MBF) Index

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## Abstract

*In the Indian economy, the MSMEs play a very critical role. The growth & development of MSMEs, particularly in the manufacturing space, is aligned with job creation, leading to creation of employment opportunities and thereby eradication of poverty. The MSMEs are widespread and present in almost all the states & union territories in India. However, the spread of MSMEs is not even across the states. While in some states the MSMEs are torch bearer of manufacturing art, in others MSMEs are yet to realise their full potential. The current study on the performance of MSMEs, particularly the ones engaged in manufacturing sector, in different states tries to ascertain the factors behind differences in performance of MSMEs through the prism of an index known as MSME Manufacturing Business Facilitator Index.*

**Key words:** Select States, Poor performing states, Economic and Social Infrastructure, Growth differential, HDI of states, MSME Manufacturing Business Facilitator (MSME - MBF) Index.

## Introduction

India is a federation of dependent states. Some states are industrially developed where as some others are agriculturally advanced. While some others are doing well in both industry and agriculture, some others are doing well in the services sector. States like Maharashtra, Gujarat, Tamil Nadu, West Bengal, Uttar Pradesh, etc. are industrially developed, while states like Punjab, Haryana, etc. are doing well in agricultural space. Different parts of the country has different advantages; while west and south India are industrial belts, east and north India have agricultural landscapes.

The MSMEs and in particular the MSME-Manufacturing enterprises are vividly active in states and regions that are traditionally prosperous industrially. When we talk of industrially advanced states in India we generally come across few well-known names such as Maharashtra, Gujarat in the Western India, Tamil Nadu, Kerala and Andhra Pradesh in the South India, West Bengal in the Eastern part of India and Uttar Pradesh in the northern India. Based on the available data on MSME manufacturing sector, let us examine how the

performance of states vary and how the traditionally well off industrially developed states compares among them. We will be considering three related variables namely number of MSME manufacturing units, MSME manufacturing employment and market value of fixed assets of the MSME manufacturing sector for our study. Before we proceed further, we need to identify the states which are doing better than other states / UTs in the MSME manufacturing space on the basis of three variables just mentioned.

## State wise MSME manufacturing units, employment and the market value of fixed assets

We will now analyse the state / UT wise number of MSME manufacturing units, employment provided by the MSME sector in all the states / UTs and market value of fixed assets of the MSME in all the states. Most importantly, we will look at the share of different states and UTs in total number of MSMEs manufacturing units, MSME employment and market value of fixed assets of the MSME sector in India.

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Table 1: State /UT wise number of MSME manufacturing Enterprises

Sr. No	State / UT	Number of Enterprises	Percentage of all India total (%)
1	Uttar Pradesh	2422	11.30
2	West Bengal	2123	9.90
3	Tamil Nadu	2055	9.58
4	Andhra Pradesh	1536	7.16
5	Gujarat	1533	7.15
6	Maharashtra	1532	7.15
7	Kerala	1444	6.74
8	Madhya Pradesh	1257	5.86
9	Karnataka	1248	5.82
10	Punjab	1014	4.73
11	Odisha	997	4.65
12	Rajasthan	969	4.52
13	Bihar	798	3.72
14	Haryana	520	2.43
15	Jharkhand	443	2.07
16	Chhattisgarh	301	1.40
17	Assam	234	1.09
18	Uttarakhand	224	1.04
19	Delhi	179	0.83
20	Himachal Pradesh	172	0.80
21	J & K	133	0.62
22	Goa	59	0.28
23	Meghalaya	50	0.23
24	Manipur	48	0.22
25	Chandigarh	29	0.14
26	Tripura	27	0.13
27	Arunachal Pradesh	25	0.12
28	Nagaland	17	0.08
29	Mizoram	14	0.07
30	Puducherry	14	0.07
31	A & N Islands	8	0.04
32	Dadra & Nagar Haveli	6	0.03
33	Sikkim	6	0.03
34	Daman Diu	2	0.01
35	Lakshadweep	1	0.00
	<b>Total</b>	<b>21440.00</b>	<b>100</b>

Source: Annual Report 2014-15, Ministry of MSME, Government of India.

From the information presented in Table 1, we observe that the country had 214.4 lakh MSME units spread over all the states and union territories as per the fourth MSME census. The state of Uttar Pradesh leads the chart with 2422 thousand MSME units, which forms 11.3 per cent of total MSME units in the

country. Uttar Pradesh (11.3%) is being closely followed by the states of West Bengal (9.9%), Tamil Nadu (9.6%), Andhra Pradesh (7.2%), Gujarat (7.2%), Maharashtra (7.2%)& Kerala (6.7%).

### Employment by the MSME sector

Table 2: State / UT wise MSME Employment

Sr. No	State / UT	Employment	Percentage of all India total (%)
1	Uttar Pradesh	5931	11.82
2	West Bengal	5853	11.66
3	Tamil Nadu	5315	10.59
4	Andhra Pradesh	3898	7.77
5	Maharashtra	3561	7.09
6	Gujarat	3442	6.86
7	Kerala	3319	6.61
8	Karnataka	3047	6.07
9	Odisha	2367	4.72
10	Madhya Pradesh	2030	4.04
11	Rajasthan	1842	3.67
12	Punjab	1832	3.65
13	Bihar	1745	3.48
14	Haryana	1223	2.44
15	Jharkhand	899	1.79
16	Assam	659	1.31
17	Delhi	652	1.30
18	Chhattisgarh	543	1.08
19	Uttarakhand	442	0.88
20	J & K	307	0.61
21	Himachal Pradesh	292	0.58
22	Manipur	158	0.31
23	Goa	120	0.24
24	Meghalaya	117	0.23
25	Nagaland	116	0.23
26	Arunachal Pradesh	87	0.17
27	Tripura	76	0.15
28	Chandigarh	70	0.14
29	Mizoram	57	0.11
30	Sikkim	56	0.11
31	Puducherry	46	0.09
32	Dadra & Nagar Haveli	33	0.07
33	Daman Diu	29	0.06
34	A & N Islands	24	0.05
35	Lakshadweep	5	0.01
	<b>Total</b>	<b>50193</b>	<b>100</b>

Source: Annual Report 2014-15, Ministry of MSME, Government of India.

Information presented in Table 2 shows that the MSME units provided employment opportunity to 50193thousand people spread over all the states and union territories as per the fourth MSME census. The state of Uttar Pradesh leads the chart with

5931thousand employment opportunities. Uttar Pradesh (11.8%) is being closely followed by the states of West Bengal (11.7%), Tamil Nadu (10.6%), Andhra Pradesh (7.8%), Maharashtra (7.1%), Gujarat (6.9%)& Kerala (6.6%).

### Market value of fixed assets of MSMEs

Table 3: State / UT wise market value of fixed assets of MSMEs

Sr. No.	State / UT	Market value of fixed assets (Rs. Billion)	Percentage of all India total (%)
1	Gujarat	1667.5	24.17
2	Tamil Nadu	778.2	11.28
3	Maharashtra	679.4	9.85
4	Uttar Pradesh	561.6	8.14
5	Kerala	443.5	6.43
6	West Bengal	394.3	5.72
7	Punjab	371.3	5.38
8	Andhra Pradesh	327.6	4.75
9	Karnataka	271.6	3.94
10	Haryana	260.0	3.77
11	Rajasthan	254.5	3.69
12	Odisha	122.8	1.78
13	Madhya Pradesh	105.3	1.53
14	Delhi	101.6	1.47
15	J & K	84.8	1.23
16	Bihar	84.1	1.22
17	Assam	69.4	1.01
18	Uttarakhand	60.1	0.87
19	Himachal Pradesh	56.0	0.81
20	Jharkhand	50.2	0.73
21	Goa	38.2	0.55
22	Chhattisgarh	33.0	0.48
23	Daman Diu	18.8	0.27
24	Nagaland	12.7	0.18
25	Puducherry	11.4	0.16
26	Arunachal Pradesh	9.4	0.14
27	Tripura	6.6	0.1
28	Chandigarh	6.5	0.09
29	Manipur	6.1	0.09
30	Meghalaya	4.7	0.07
31	Mizoram	4.0	0.06
32	Dadra & Nagar Haveli	2.3	0.03
33	A & N Islands	1.0	0.01
34	Sikkim	0.7	0.01
35	Lakshadweep	0.2	0
	<b>Total</b>	<b>6899.5</b>	<b>100</b>

Source: Annual Report 2014-15, Ministry of MSME, Government of India.

As per the information presented in table 3, we observe that the market value of fixed assets of all MSME units in the country stood at Rs. 6899.5 billion as per the fourth MSME census. The state of Gujarat leads the table with Rs. 1667.5 billion worth of MSME fixed assets. Gujarat (24.2%) is being closely followed by the states of Tamil Nadu (11.3%), Maharashtra (9.9%), Uttar Pradesh (8.1%), Kerala (6.4%), & West Bengal (5.7%).

### Ranking of States

After presenting the important data with reference to the MSME manufacturing sector in Tables 1, 2 and 3, the next step is to identify the states where in the MSME sector has major

presence or the states which may be considered as the hotbed for the growth of the MSMEs. In order to identify these states we will be considering the same three parameters, namely, number of MSME enterprises, size of MSME employment and market value of fixed assets of the MSME sector. On the basis of these three parameters we have evaluated the state wise position i.e. the share of a particular state in all India total for a particular parameter. Based on this, we selected the states which are having maximum share among all the states in each of the three parameters. Based on the data given in Tables 1, 2 and 3, the Select States having a maximum share in each of the parameters are given here under:

**TABLE 4: POSITION OF SELECT STATES IN MSME MANUFACTURING**

Number of MSME units		MSME Employment		Market value of fixed assets of the MSME sector	
State	All India Rank	State	All India Rank	State	All India Rank
Uttar Pradesh	1	Uttar Pradesh	1	Gujarat	1
West Bengal	2	West Bengal	2	Tamil Nadu	2
Tamil Nadu	3	Tamil Nadu	3	Maharashtra	3
Andhra Pradesh	4	Andhra Pradesh	4	Uttar Pradesh	4
Gujarat	5	Maharashtra	5	Kerala	5
Maharashtra	6	Gujarat	6	West Bengal	6
Kerala	7	Kerala	7	Andhra Pradesh	7

From the information presented in Table 4, we observe that top states in all the three parameters are Maharashtra, Gujarat, Tamil Nadu, West Bengal, Andhra Pradesh, Kerala & Uttar Pradesh.

The seven select / top states have experienced higher growth than the national average in MSME sector. In our state wise analysis of performance of the MSME manufacturing sector, we have considered Select seven States vis-à-vis the five larger but Poor Performing States of Odisha, Bihar, Assam, Madhya

Pradesh, & Rajasthan to ascertain why the performance of the MSME manufacturing sector in the Select States is different from the performance of the MSMEs in the Poor Performing States. It is pertinent to mention here that the Poor Performing States mentioned above are traditionally the states with low level of industrialization. Even in the context of MSME performance, these states occupy the lower rank in terms of their share in number of MSME units, size of MSME employment and value of fixed assets in the MSME sector

**Table 5: Position of Poor Performing States In MSME Manufacturing**

Number of MSME units		MSME Employment		Market value of fixed assets of the MSME sector	
State	All India Rank	State	All India Rank	State	All India Rank
Madhya Pradesh	8	Odisha	9	Rajasthan	11
Odisha	11	Madhya Pradesh	10	Odisha	12
Rajasthan	12	Rajasthan	11	Madhya Pradesh	13
Bihar	13	Bihar	13	Bihar	16
Assam	17	Assam	16	Assam	17

Besides, the poor performing states mentioned above also form part of the 'BIMAROU' acronym which comprises of the states of Bihar, Madhya Pradesh, Rajasthan, Odisha and Uttar Pradesh. Since we observed the better performance of the state of Uttar Pradesh in the spheres of MSME manufacturing sector, we can modify the title of relevant grouping to 'BIMARO'.

Moreover, the most important reason behind selecting these five poor performing states is the fact that these are large ones and together they account for more than one fourth of India's total population and if these states continue to remain in perpetual poverty, the very purpose of developmental planning in India will lose its significance..

**TABLE 6: COMPARISON OF SELECT STATES AND POOR PERFORMING STATES**

Parameters	Number of MSME units (In lakh)	MSME employment (In Lakh)	Market value of fixed assets of the MSME sector (Rs. Crore)
Total share of Select States (%)	58.98	62.40	70.33
All India (%)	100.0	100.0	100.0
Total share of Poor Performing States (%)	19.85	17.22	9.22
Average of Select States	18.06	44.74	69318
All India average	6.13	14.34	19201
Average of Poor Performing States	8.51	17.29	12723
Median for Select States	15.36	38.98	56161
Median for all India	2.24	5.43	6015
Median for Poor Performing States	9.69	18.42	10530
Coefficient of variation of Select States (%)	21.39	26.28	66.09
Coefficient of variation of all India (%)	119.08	124.95	166.78
Coefficient of variation of Poor Performing States (%)	44.88	37.22	58.18

The information presented in Table 6 provides a comparative picture of the Select States, all India level and the Poor Performing States in number of MSME units, total employment and market value of fixed assets of the MSME sector. We observe that the Select States account for around 59 per cent of total MSME units operating in the country and they are home to around 62 per cent of total employment created by the MSME sector in the country. Together the Select States account for 70 per cent of the fixed assets of the MSME sector in the country. In comparison, the Poor Performing States account for around 19 per cent of total MSME enterprises, 17 per cent of total MSME employment and less than 10 per cent of total MSME fixed assets in the country. The average number of MSME enterprise in the Select States are 1806 thousand which is much higher compared to all India average of 613 thousand and Poor Performing States' average of 851 thousand. On a similar note the median values of the Select States are higher than the median values for all India as well as for the Poor Performing States. The coefficient of variation, which may be used as a measure of stability, indicates relative stability in all parameters for the Select States compared to the Poor Performing States and the all India average.

### Literature Review

S. N. Rajesh Raj and Mihir K. Mahapatra (2012) in their article titled "Growth & Productivity: Performance of Small Manufacturing Enterprises (SMEs), Insights from major states in India" observed that there is a general erosion in growth of output in SMEs during the reforms period as compared to the pre reforms period with variation across different categories of states.

Sudha Venkatesh and Krishnaveni Muthiah (2012) in their article titled SMEs in India: Importance & Contribution have ascertained that for a developing nation like India, where the labour is abundant and capital is scarce, the small sector is a

major source of employment for millions of people. Keeping in view the importance of SMEs, the Indian government has included this sector in its five-year plans. The SMEs are still hampered by the problems of finance, marketing and low quality. Taking into account the enormous potential of the small sector, the entrepreneurs and the policymakers must act collectively to facilitate growth in this sector.

Anisha Sahapathi and Dr Parul Khanna (2011) in their study titled 'An Appraisal of Small & Medium Enterprises (SMEs) in Haryana state of India' it is imperative to realize that performance goals and targets, set in production and low costs for the SMEs can only be achieved when SMEs are provided with good SME-friendly policies, conducive operating environment, improvements in infrastructure, peace and security; and have the right type of personnel, that have cooperative attitudes and spirit, good team work, high morals, high motivation, high performance goals, have the desire to achieve the company's goals and objectives and are served with good communication. Rakesh C. (2014) in his article titled 'PEST Analysis for MSMEs Sustainability' MSMEs, before creating business plans or making decisions, it is important to 'scan' the external environment. This can be achieved through a PEST analysis, i.e. an investigation of the Political, Economic, Social and Technological influences on a business. In addition it is also important to be aware of the actions of your competitors. These forces are continually in a state of change. This PEST external factor analysis helps the MSMEs to list out the number of opportunities available to meet and the threats which causes major damages to their business units.

Dr. Ali Akbar Kadivar (2016) in his article titled 'Growth & Performance of SMEs in India: An Overview' has concluded that India accorded high priority to SMEs from the very beginning and pursued support policies to make these enterprises viable, vibrant and over time, these have become major contributors to the GDP. Moreover, the MSMEs have weathered and

overcome stiff competition in the post LPG period in the domestic and international arena. In nutshell, the MSMEs play a leading role in propelling economic growth sustaining livelihood and in promoting equitable regional development.

Dr. P Uma (2013) in his article titled 'Role of SMEs in Economic Development of India' has concluded that every industrial and business organization has to take up the responsibility to meet the challenges posed by globalization. Not only the big business, but even a small business enterprise in India has to take up the responsibility to meet the standards, qualities, technological up gradation, skills technical know-how needed in the global market.

From above, we observe that though variety of literature is available in the domain of the performance of MSMEs in India, no significant literature or studies exist in the areas of comparative analysis of performance of the MSME sector in different states. In this direction, the current study attempts to contribute tangibly to the areas of comparative performance analysis of the MSME sector in major states.

### **The Concept of 'MSME Manufacturing Business Facilitator (MSME – MBF) Index'**

Here we have tried to develop the MSME-MBF Index by identifying the criteria which have made a state suitable for the promotion of MSMEs. We constituted this index based on criteria such as the size of active labour force, literacy rate as a measure of employability of the labour force, availability of power, road and port infrastructure, credit facilities, size of GSDP of respective states, Fiscal discipline in the state, Ease of Doing Business Index of the states, and Density of MSME Manufacturing clusters in the state by giving appropriate weights to these criteria. We elaborate these criteria below:

- a) Active labour force in the States as a percentage of active labour force in the country and Literacy rate of the State as a measure of employability of the available labour force;
- b) State's share in total installed power in the country and per capita availability of power in the State;
- c) Road infrastructure in terms of percentage of total national highways in the state and per capita availability of national highways in the State;
- d) Credit flow measured in terms of Credit to Deposits ratio in the State;
- e) Port infrastructure in terms of availability in the State;
- f) Size of Gross State Domestic Product (GSDP) of States;
- g) Fiscal discipline of States as measured by the fiscal deficit ratio of the States;
- h) Ease of Doing Business (EoDB) Index rank of States;

- i) Penetration of MSME Manufacturing clusters in states measured in terms of an MSME cluster in Sq. Km. in States.

In Table 7, we have specified the criteria and sub-criteria and the weights assigned to them by us. It is seen from Table 7, that labour force criterion has two sub-criteria i.e. size of labour force and the employability of labour force measured in terms of the literacy rate of the state. We have given a weight of 7.5 to the first sub-criterion whereas the second sub-criterion is assigned a weight of 12.5. With a total weight of 20, availability of quality labour force is being considered as the most important for the growth of the MSME sector. It has two rationales; manufacturing is a labour incentive activity and it requires certain skills. Power, Road and Credit flow we considered as next important for MSMEs growth hence we assigned a weight of 15 each. Power criterion has two sub-criteria and while the first sub-criterion i.e. percentage of total installed power in the country has been given a weight of 10, the second one i.e. per capita availability of power has been given a weight of 5, with total weight as 15. Uninterrupted availability of quality power is a very important factor supporting manufacturing growth. Similarly, Road criterion also has two sub-criteria with the weights of 7.5 to each, with total weight of 15. Credit-Deposits ratio in the state has been given a weight of 15. Next we assign a weight of 5 to port infrastructure. We assign a weight of 5 each to the size of GSDP of states and also to fiscal management in states. This is because the size of GSDP is directly related to the size of local market which encourages MSMEs to grow. Similarly, better fiscal management, measured in terms of fiscal deficit as percentage of GSDP, attracts potential investors to a particular state. Next, we give a weight of 10 to the Ease of Doing Business (EoDB) index of states. The Ease of Doing Business (EoDB) Index is the assessment of State Implementation of Business Reforms being prepared by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, in partnership with the World Bank Group. The Assessment studies the extent to which states have implemented DIPP's 340-point Business Reform Action Plan (BRAP) for States/UTs for a particular year. The BRAP includes recommendations for reforms on 58 regulatory processes, policies, practices or procedures spread across 10 reform areas spanning the lifecycle of a typical business. In short, the EoDB index measures the suitability of a state for setting up a new business from regulatory point of view. Lastly, we give a weight of 10 to density of MSME clusters measured in terms of the ratio of total geographical area of the state and total number of MSME clusters. We consider that a state having high MSME penetration has greater scope for growth of the MSME sector in that state.

The total labour force in a state has been arrived at by multiplying the total population of the state as per Census 2011

with the workforce participation rate as per the NSSO survey of 68th round, 2011-12. Similarly, the literacy rate of states has been sourced from the Census 2011 report. Information on total installed power in a state and the state wise length of national highways (NHs) has been sourced from the annual reports of the respective ministries (Ministry of Power and Ministry of Road transport & Highway) for the FY 2015-16. Per capita availability of power and per capital availability of national highways has been arrived at by dividing the total installed power and total length of national highways in the state with the total population of the state. Similarly, percentage of power and national highway in a particular state has been arrived at by way of dividing the installed power capacity of a state with the total installed power capacity of the country and the length of national highways in a particular state with the total length of national highways in the state. State wise credit-deposit ratio has been calculated after obtaining

information on bank credit and deposits from RBI's quarterly statistics on aggregate deposits and credit for the period ended March 31, 2016. Port statistics for different states has been sourced from the Annual Report of Ministry of Shipping for the FY 2015-16. Information on Size of GSDP at current prices of states for the year 2013-14 has been obtained from RBI's database on Indian Economy. Information on fiscal deficit as a percentage of GSDP has been source from RBI's report on analysis of State Finances FY 2015-16. Data on EoDB index for states has been sourced from 'Assessment of State Implementation of Business Reforms 2016' report being published by DIPP, Ministry of Commerce and Industry, in partnership with the World Bank Group. Lastly, information on geographical area of states and number of state wise MSME clusters has been sourced from Census 2011 report and UNIDO respectively.

**TABLE 7: PRINCIPAL CRITERIA AND SUB CRITERIA**

Sr. No.	Criteria	Sub-criteria	Weight
1.	Labour force	(a)Share of the State in active labour force in the country	7.5
		(b)Literacy rate	12.5
2.	Power	(a) Share of the State in total installed power in the country	10.0
		(b)Per capita availability of power in the State	5.0
3.	Road	(a) Share of the State in total national highway in the country	7.5
		(b)Per capita availability of national highways in the State	7.5
4.	Credit Flow	CD Ratio in the State	15.0
5.	Port	Availability in the State	5.0
6.	GSDP Size	GSDP Size	5.0
7.	Fiscal Management in States	Fiscal Deficit as %ge of GSDP	5.0
8.	Ease of Doing Business	Rank of States	10.0
9.	Density of MSME Clusters in States	An MSME cluster in Sq. Km.	10.0
<b>Total weight</b>			<b>100</b>

We have specified sub-criteria wise weights the details of which are given in Table 8. In case of sub-criteria under labour, power, road, credit-deposit ratio and size of GSDP the average of values for Select States(SS) and Poor Performing States (PPS) is being taken and a state having value higher than the average value has been given full marks under that particular sub criteria. States having values less than the average value has been given half of the total marks under that particular sub criteria. In case of the criteria, port, availability is assigned full mark whereas non availability attracts zero marks. In case of fiscal deficit ratio, we have set the benchmark as 3 percentage of GSDP since the Fiscal

Responsibility and Budget Management Act says that in the long run a fiscal deficit of 3% of GDP for India is in synchronisation with country's development aspirations. States having fiscal deficits of less than and up to 3% of GSDP thus is given full marks under the criteria whereas states having fiscal deficit more than 3% of GSDP are allotted no marks under this criteria. In case of EoDB index, the state having the highest rank among the Select States and the Poor Performing States have got full marks while other states have been given marks proportionate to the marks obtained by the highest ranking state. In case of Density of MSME clusters, states have been

**TABLE 8: COMPUTATION OF WEIGHTS FOR SUB-CRITERIA**

Sr. No	Criteria	Sub criteria	Weight
1.	Labour Force (a)	Equal to or less than the average of all the Select States (SS) and Poor Performing States (PPS)	3.75
		More than the average of all the SS and PPS	7.50
1.	Labour Force (b)	Equal to or less than the average of all the SS and PPS	6.25
		More than the average of all the SS and PPS	12.50
2.	Power (a)	Equal to or less than the average of all the SS and PPS	5.00
		More than the average of all the SS and PPS	10.00
2.	Power (b)	Equal to or less than the average of all the SS and PPS	2.50
		More than the average of all the SS and PPS	5.00
3.	Road (a)	Equal to or less than the average of all the SS and PPS	3.75
		More than the average of all the SS and PPS	7.50
3.	Road (b)	Equal to or less than the average of all the SS and PPS	3.75
		More than the average of all the SS and PPS	7.50
4.	Credit Flow	Equal to or less than the average of all the SS and PPS	7.50
		More than the average of all the SS and PPS	15.00
5.	Port	Yes	5.00
		No	0.00
6.	GSDP (a)	Equal to or less than the average of all the SS and PPS	2.50
		More than the average of all the SS and PPS	5.00
7.	GSDP (b)	Equal to or less than 3%	5.00
		More than 3%	0.00
8.	Ease of Doing Business Index	Rank 1	10.00
		Others	Proportionately
9.	Density of MSME Clusters	<b>High Density:</b> Better than the average of all the SS and PPS	10.00
		<b>Low Density:</b> Worse than the average of all the SS and PPS	0.00
<b>Maximum Value the Index Can Give (1+2+3+4+5+6+7+8+9)</b>			<b>100.00</b>

identified in to two broad categories; the ones having high density and the others having low density. The high density states are the ones where a MSME cluster is located in a sq. km. area which is better than the average of the Select States and Poor Performing States. Similarly, the low density states are the ones where an MSME cluster is found in a sq. km. which is worse than the average of the Select States and Poor Performing States. The high density states have been given full marks whereas the states with low density of MSME clusters have attracted zero marks under the sub criteria.

In studying socio-economic profile of states, we have included six variables namely, Labour Force Participation Rate (LFPR),

literacy rate, ratio of Gross State Domestic Product (GSDP) to Gross Domestic Product (GDP), Compound Average Growth Rate (CAGR) of GSDP for last four years, Foreign Direct Investment (FDI) in USD BN and per capita Net State Domestic Product (NSDP) in rupees.

#### 5.1.A. Profile of Select States

In this section 5.1.A. we depict the profiles of Select States in Table 9.

**TABLE 7: PRINCIPAL CRITERIA AND SUB CRITERIA**

Parameters	Uttar Pradesh	West Bengal	Tamil Nadu	Andhra Pradesh	Gujarat	Maharashtra	Kerala
LFPR (%)	47.0	52.1	59.7	64.4	57.8	58.0	53.5
Literacy Rate (%)	67.7	76.3	80.3	67.0	91.8	82.3	94.0
GSDP to GDP Ratio (%)	7.5	5.9	7.7	3.9	7.1	14.1	3.6
GSDP CAGR for last 4 years (%)	5.4	6.4	6.0	5.8	7.2	6.5	6.0
FDI in state (USD. Bn)	0.1	1.0	4.5	1.6	2.2	9.5	0.1
Per Capita NSDP (Rs.)	19233	36293	62361	42170	63168	69097	58961

Source: LFPR: NSSO, 68th Round; Literacy Ratio: Census 2011; GSDP, GDP, Per Capita NSDP: RBI; FDI in State: Ministry of Commerce and Industry.

**5.1.A.1. LFPR:** Labour force refers to the population which supplies or offers to supply labour for pursuing economic activities for the production of goods and services and, therefore, includes both 'employed' and 'unemployed' persons/person-days. LFPR is defined as the proportion of persons/person-days in the labour-force to the total persons/person-days. These ratios are given in per 1000 of persons/person-days. The LFPR values given in Table 4.9 are based on 'usual status' 'principal source' of activity approach. The Usual Status approach to measuring unemployment uses a reference period of 365 days i.e. one year preceding the date of the survey of NSSO for measuring unemployment. The first step to estimate employment numbers and unemployment rate through this approach involves determination of the Principal usual activity status of the individual. Among the Select States, Andhra Pradesh has the highest labour force participation rate at 64.4 per cent followed by Tamil Nadu (59.7%), Maharashtra (58%), Gujarat (57.8%), Kerala (53.5%), West Bengal (52.1%) and Uttar Pradesh (47%) as per the 68th round survey of the NSSO, 2011-12.

**5.1.A.2. Literacy Rate:** The total percentage of the population of an area at a particular time aged seven years or above who can read and write with understanding. The literacy rate of a particular state may be used to signify the overall advancement of the society of the state. Among the Select States, literacy rate is the highest for Kerala at 94 per cent followed by Gujarat (91.8%), Maharashtra (82.3%), Tamil Nadu (80.3%), West Bengal (76.3%), Uttar Pradesh (67.7%) and Andhra Pradesh (67%) as per census 2011.

**5.1.A.3. GSDP to GDP Ratio:** GSDP to GDP ratio signifies the relative size of the GDP of a state compared to the national GDP and thereby the economic significance of the state concerned. The state of Maharashtra which has the largest economy among all the states in India has a GSDP-GDP ratio of 14.1 per cent, followed by Tamil Nadu (7.7%), Uttar Pradesh (7.5%), Gujarat

(7.1%), West Bengal (5.9%), Andhra Pradesh (3.9%) and Kerala (3.6%) in that order. The information furnished here pertains to the FY 2013-14 for which comparable data on state GSDP and GDP, with base year 2004-05, are readily available with RBI.

**5.1.A.4. CAGR of the GSDP of Select States:** While the Indian economy continues to grow at an impressive growth rate, different states within the Indian economy contribute differently to this growth process. Among the Select States, the CAGR growth for the period 2010-11 to 2013-14 was the highest for Gujarat at 7.2 per cent. On the other hand, during the period under consideration, Maharashtra recorded 6.5 per cent, followed by West Bengal (6.4%), Tamil Nadu & Kerala (6.0% each), Andhra Pradesh (5.8%) and Uttar Pradesh (5.4%).

**5.1.A.5. Foreign Direct Investment:** As per the information available with the ministry of commerce and industry, during the period FY 2015-16, the Maharashtra state has attracted the highest amount of FDI at 9.5 billion USD, followed by Tamil Nadu (4.5 bn USD), Gujarat (2.2 bn USD), Andhra Pradesh (1.6 bn USD), West Bengal (1.0 bn USD) and Kerala & Uttar Pradesh (0.1 bn USD). Higher FDI inflows indicate that the state remains the preferred destination of investment among all the states in the country.

**5.1.A.6. Per Capita Net State Domestic Product:** Per capita income of a state may be taken as an indicator of economic well-being of its people. Among the Select States Maharashtra has the highest per capita NSDP of Rs. 69097 for the FY 2013-14 at 2004-05 prices. Maharashtra is being closely followed by Gujarat (Rs. 63168), Tamil Nadu (Rs. 62361), Kerala (Rs. 58961), Andhra Pradesh (Rs. 42170), West Bengal (Rs. 36293) and Uttar Pradesh (Rs. 19233).

#### **5.1.B. Profile of Poor Performing States**

After looking at the profile of the Select States, let us now describe the profile of the Poor Performing States in Table 10.

**TABLE 10: PROFILE OF POOR PERFORMING STATES**

Parameters	Madhya Pradesh	Rajasthan	Bihar	Odisha	Assam
LFPR (%)	55.3	54.6	43.4	54.6	50.2
Literacy Rate (%)	69.3	66.1	61.8	72.9	72.2
GSDP to GDP Ratio (%)	3.5	4.1	2.6	2.3	1.4
GSDP CAGR for last 4 years (%)	8.9	6.5	10.0	3.2	5.8
FDI in state (USD. Bn)	0.1	0.1	0.0	0.0	0.0
Per Capita NSDP (Rs.)	26853	31836	15506	24929	23392

Source: LFPR: NSSO, 68th Round; Literacy Ratio: Census 2011; GSDP, GDP, Per Capital NSDP: RBI; FDI in State: Ministry of Commerce and Industry, Government of India.

**5.1.B.1.LFPR:**The LFPR values given in Table 10 are based on 'usual status' 'principal source' of activity approach. Among the Poor Performing States, Bihar has the lowest LFPR at 43.4 per cent. Among others, Madhya Pradesh has a LFPR of 55.3%, followed by Rajasthan & Odisha (54.6% each), and Assam (50.2%).

**5.1.B.2. Literacy Rate:** Among the Poor Performing States, literacy rate is the lowest for Bihar at 61.8 per cent. While Odisha has literacy rate of 72.9%, Assam has 72.2%, Madhya Pradesh (69.3%), and Rajasthan (66.1%), as per census 2011.

**5.1.B.3. GSDP to GDP Ratio:** Among the Poor Performing States Assam has the lowest GSDP-GDP ratio of 1.4 per cent. While Rajasthan has a GSDP-GDP ratio of 4.1% followed by Madhya Pradesh (3.5%), Bihar (2.6%), and Odisha (2.3%) in that order. The information furnished here pertains to the FY 2013-14 for which comparable data on state GSDP and GDP, with base year 2004-05, are readily available.

**5.1.B.4. CAGR of the GSDP of Poor Performing States:** The GSDP growth rate of Poor Performing States has been impressive. Among the Select States, the CAGR growth for the period 2010-11 to 2013-14 was the highest for Bihar at 10.0 per cent. On the other hand, during the period under consideration,

Madhya Pradesh recorded a CAGR GSDP growth of 8.9 per cent, followed by Rajasthan (6.5%), Assam (5.8%) and Odisha (3.2%).

**5.1.B.5. Foreign Direct Investment:** As per the information available with the ministry of commerce and industry, during the period FY 2015-16, the Poor Performing States have fared poorly when it comes to attracting foreign direct investment (FDI). Among them, Madhya Pradesh has been able to attract USD 0.08 billion of FDI followed by Rajasthan (USD 0.05 bn), Bihar (USD 0.04 bn), Odisha and Assam (USD 0.1 bn each). Lower FDI inflows indicate that these states have failed to be the preferred destinations of investment among all the states in the country.

**5.1.B.6. Per Capita Net State Domestic Product:** Among the Poor Performing States Rajasthan has the highest per capital NSDP of Rs. 31836 for the FY 2013-14 at 2004-05 prices. Rajasthan is being closely followed by Madhya Pradesh (Rs. 26853), Odisha (Rs. 24929), Assam (Rs. 23392), and Bihar (Rs. 15506).

### **Comparison of Profile: Select States vis-a-vis The Poor Performing States**

After having discussed the profiles of Select States and Poor Performing States independently, let us now have a look at the comparative picture.

**TABLE 11: COMPARATIVE PROFILES: SELECT STATES VIS-À-VIS POOR PERFORMING STATES**

Parameters	Average of Select States	All India	Average of Poor Performing States
LFPR (%)	56.1	53.9	51.6
Literacy Rate (%)	79.9	74.0	68.5
GSDP to GDP Ratio (%)	7.1	NA	2.8
GSDP CAGR for last 4 years (%)	6.2	5.5	6.9
FDI in state (USD. Bn)	2.7	40.0	0.0
Per Capita NSDP (Rs.)	50183	39904	24503

### 6.1. LFPR

We observe from Table 11 that the average LFPR of Select States stood at 56.1 per cent as compared to the national average of 53.9 per cent. As against this the Poor Performing States have a lower LFPR of 51.6 per cent.

### 6.2. Literacy Rate

While the average literacy rate for the Select States is 79.9 per cent, the national average is 74 per cent and the average for Poor Performing States is 68.5 per cent.

### 6.3. GSDP to GDP Ratio

The average GSDP-GDP ratio for the Select States stood at 7.1 per cent as against Poor Performing States' average of 2.8 per cent.

### 6.4. Growth of the GSDP of Select States

While the average of CAGR growth of GSDP for Select States during the period 2010-11 to 2013-14 stood at 6.2 per cent, the national average is 5.5 per cent and the average of CAGR growth of GSDP for Poor Performing States is 6.9 per cent.

### 6.5. Foreign Direct Investment

As far as FDI inflows are concerned, the average FDI inflows for the Select States during FY 2015-16 stood at USD 2.7 billion. The same for Poor Performing States was USD 0.04 billion. The total amount of FDI inflows to India during FY 2015-16 stood at USD 40.0 billion.

### 6.6. Per Capita Net State Domestic Product

We observe that for the FY 2013-14, for which comparable information are available, the average per capita NSDP for the Select States stood at Rs. 50,813 as against the all India average of Rs. 39,904 and the average for Poor Performing States of Rs. 24,503.

From the above discussion we notice that the performance of the Select States is far better than the performance of the Poor Performing States. For example, while labour force participation of Maharashtra is 58 per cent, for Bihar it is only 43.4 per cent. Similarly, while the GSDP CAGR (last 4 years) stood at 7.2 per cent for Gujarat, for the state of Odisha it is only 3.2 per cent.

### MSME Manufacturing Business Facilitator Index For 'Select States'

Using the criteria and scoring matrix given in Tables 7 and 8 respectively, we have arrived at the state wise MSME Manufacturing Business Facilitator Index which has a maximum value of '100' and minimum value of '0'. The state with an MSME Manufacturing Business Facilitator Index closer to hundred would be considered most suitable for the growth of MSMEs.

**TABLE 12: STATE WISE MSME MANUFACTURING BUSINESS FACILITATOR INDEX FOR THE SELECT STATES**

Criteria	Sub-criteria	Uttar Pradesh	West Bengal	Tamil Nadu	Andhra Pradesh	Gujarat	Maharashtra	Kerala
Labour Force (a)	Percentage of active labour force in the country (%)	14.4	7.2	6.6	8.4	5.5	10.1	2.5
	Score obtained	7.50	7.50	7.50	7.50	3.75	7.50	3.75
Labour Force (b)	Literacy Rate	67.7	76.3	80.3	67.0	91.8	82.3	94.0
	Score obtained	6.25	12.50	12.50	6.25	12.50	12.50	12.50
Power (a)	Percentage of total installed power in the country (%)	11.9	7.0	17.1	9.9	20.4	26.8	1.4
	Score obtained	10.00	5.00	10.00	5.00	10.00	10.00	10.00
Power (b)	Per capita availability of power (KW)	0.2	0.2	0.7	0.3	1.0	0.7	0.1
	Score obtained	2.50	2.50	5.00	2.50	5.00	5.00	2.50

<b>Road (a)</b>	Percentage of total NH in the country (%)	<b>8.4</b>	<b>2.9</b>	<b>5.0</b>	<b>7.8</b>	<b>4.9</b>	<b>7.4</b>	<b>1.8</b>
	<b>Score obtained</b>	7.50	3.75	3.75	7.50	3.75	7.50	3.75
<b>Road (b)</b>	Per capita availability of NH (KM)	<b>43</b>	<b>32</b>	<b>69</b>	<b>93</b>	<b>82</b>	<b>66</b>	<b>54</b>
	<b>Score obtained</b>	3.75	3.75	3.75	7.50	7.50	3.75	3.75
<b>Credit Flow</b>	CD Ratio(%)	<b>43.7</b>	<b>54.2</b>	<b>112.9</b>	<b>103.9</b>	<b>75.1</b>	<b>102.7</b>	<b>61.8</b>
	<b>Score obtained</b>	7.50	7.50	15.00	15.00	15.00	15.00	7.50
<b>Port</b>	Availability	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
	<b>Score obtained</b>	0.00	5.00	5.00	5.00	5.00	5.00	5.00
<b>GSDP Size</b>	GSDP Size (Rs. bn.)	<b>8627</b>	<b>7066</b>	<b>8542</b>	<b>8559</b>	<b>7656</b>	<b>15101</b>	<b>3963</b>
	<b>Score obtained</b>	5.00	5.00	5.00	5.00	5.00	5.00	2.50
<b>Fiscal Management</b>	Fiscal Deficit as %ge of GSDP	<b>2.9</b>	<b>1.7</b>	<b>2.9</b>	<b>3.0</b>	<b>2.2</b>	<b>1.6</b>	<b>3.1</b>
	<b>Score obtained</b>	5.00	5.00	5.00	5.00	5.00	5.00	0.00
<b>EoDB Index</b>	Rank of States	<b>14</b>	<b>15</b>	<b>18</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>20</b>
	<b>Score obtained</b>	0.71	0.67	0.56	10.00	3.33	1.00	0.50
<b>Density of MSME Clusters</b>	An MSME cluster in Sq. Km.	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>
	<b>Score obtained</b>	10.00	10.00	10.00	10.00	10.00	10.00	10.00
<b>Total MS Index score</b>		<b>65.7</b>	<b>68.2</b>	<b>83.1</b>	<b>86.3</b>	<b>85.8</b>	<b>87.3</b>	<b>61.8</b>

The MSME Manufacturing Business Facilitator Index for Select States given in Table 12 reveals that the state of Maharashtra is the leading state with score of 87.3, closely followed by Andhra Pradesh (86.3), Gujarat (85.8), Tamil Nadu (83.1), West Bengal

(68.2)) Uttar Pradesh (65.7), and Kerala (61.8) in that order. Let us now have a look at the MSME Manufacturing Business Facilitator Index score of the Poor Performing States as follows.

**TABLE 13: STATE WISE MSME MANUFACTURING BUSINESS FACILITATOR INDEX SCORE FOR THE POOR PERFORMING STATES**

Criteria	Sub-criteria	Madhya Pradesh	Rajasthan	Bihar	Odisha	Assam
<b>Labour Force (a)</b>	Percentage of active labour force in the country (%)	<b>6.3</b>	<b>5.8</b>	<b>6.8</b>	<b>3.5</b>	<b>2.3</b>
	<b>Score obtained</b>	3.75	3.75	3.75	3.75	3.75
<b>Labour Force (b)</b>	Literacy Rate	<b>69.3</b>	<b>66.1</b>	<b>61.8</b>	<b>72.9</b>	<b>72.2</b>
	<b>Score obtained</b>	6.25	6.25	6.25	6.25	6.25
<b>Power (a)</b>	Percentage of total installed power in the country (%)	<b>11.7</b>	<b>12.3</b>	<b>1.9</b>	<b>6.5</b>	<b>1.0</b>
	<b>Score obtained</b>	10.00	10.00	5.00	5.00	5.00
<b>Power (b)</b>	Per capita availability of power (KW)	<b>0.5</b>	<b>0.5</b>	<b>0.1</b>	<b>0.4</b>	<b>0.1</b>
	<b>Score obtained</b>	5.00	5.00	2.50	5.00	2.50

<b>Road (a)</b>	Percentage of total NH in the country (%)	<b>5.2</b>	<b>7.9</b>	<b>4.8</b>	<b>4.6</b>	<b>3.8</b>
	<b>Score obtained</b>	<b>3.75</b>	<b>7.5</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>
<b>Road (b)</b>	Per capita availability of NH (KM)	<b>72</b>	<b>115</b>	<b>47</b>	<b>111</b>	<b>122</b>
	<b>Score obtained</b>	3.75	7.50	3.75	7.50	7.50
<b>Credit Flow</b>	CD Ratio(%)	<b>60.4</b>	<b>73.3</b>	<b>33.1</b>	<b>40.4</b>	<b>41.1</b>
	<b>Score obtained</b>	7.50	15.00	7.50	7.50	7.50
<b>Port</b>	Availability	<b>No</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
	<b>Score obtained</b>	0.00	0.00	0.00	5.00	0.00
<b>GSDP Size</b>	GSDP Size (Rs. bn.)	<b>4347</b>	<b>5176</b>	<b>3437</b>	<b>2730</b>	<b>1595</b>
	<b>Score obtained</b>	2.50	2.50	2.50	2.50	2.50
<b>Fiscal Management</b>	Fiscal Deficit as %ge of GSDP	<b>2.8</b>	<b>3.2</b>	<b>3.0</b>	<b>3.0</b>	<b>2.4</b>
	<b>Score obtained</b>	5.00	0.00	5.00	5.00	5.00
<b>EoDB Index</b>	Rank of States	<b>5</b>	<b>8</b>	<b>16</b>	<b>11</b>	<b>24</b>
	<b>Score obtained</b>	2.00	1.25	0.63	0.91	0.42
<b>Density of MSME Clusters</b>	An MSME cluster in Sq. Km.	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>
	<b>Score obtained</b>	0.00	0.00	0.00	0.00	0.00
<b>Total MS Index score</b>		<b>49.5</b>	<b>58.8</b>	<b>40.6</b>	<b>52.2</b>	<b>44.2</b>

As per the information given in Table 13, among the Poor Performing States, the state of Bihar has got the lowest MSME Manufacturing Business Facilitator Index score of 40.6. Among others, the state of Rajasthan has an MSME Manufacturing Business Facilitator Index value of 58.7, followed by Odisha (52.2), Madhya Pradesh (49.5) and Assam (44.2). We also observe that in terms of the MSME-MBF index the performance of the Select States is much better than the performance of the Poor Performing States.

## Conclusion

There is no denying of the fact that the MSMEs can be aptly identified as the facilitator of sustainable growth. They can grow to provide employment opportunities eradicating unemployment and thus mitigating poverty. They can grow in areas of relative backwardness and become the rope for bridging the inequality. The MSME sector can earn huge amount of forex reserves for the country. In short, the MSMEs can be nurtured to cause positive transformations in the socio-economic milieu of a society. Therefore, the need of the hour is to devise a national policy for nurturing and strengthening the MSME eco system in the country. The current study ascertained that the differences in performance of the MSME sector in different states exist due to differences in the presence or absence of adequate enabling factors like labour force, various economic infrastructure (roads, ports, power), regulatory framework, size and status of GSDP, and density of MSME clusters etc. While states of Maharashtra, Gujarat, Tamil Nadu,

Kerala, Andhra Pradesh, Uttar Pradesh and West Bengal have made a lot of progress in the sphere of MSME manufacturing sector development, states like Rajasthan, Madhya Pradesh, Odisha, Bihar & Assam need to do a lot for the promotion & development of the MSMEs. The study also ascertains that the state of Maharashtra is the leader as far as the performance of the MSME sector is concerned given high endowment of all the identified enabling factors. Maharashtra is being closely followed by Gujarat, Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal and Kerala in that order. Among the poor performing states of Rajasthan, Madhya Pradesh, Odisha, Bihar & Assam, while the first three states have potential to emerge as next MSME hotspots, the states of Bihar & Assam have to manoeuvre a lot for the development and growth of the MSME sector. The study also earmarked the usefulness of the 'MSME Manufacturing Business Facilitator index' as a yardstick to measure the readiness of different states in creating enabling conditions for the MSME sector in India. Given the importance of eradication of unemployment and poverty in the political economy of India, even the political masters cannot afford to ignore the importance of MSMEs in creating jobs, thereby mitigating economic inequality and poverty from the Indian society. At a time when the nation is giving a clarion call for increasing the share of manufacturing in India through various policy interventions like creation of National Investment & Manufacturing Zones (NIMZs), Start Up India, Stand Up India, DeitY, etc. both the state and central governments should give adequate focus on further development of the MSME sector in the country.

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To become a Fully Integrated, Socially Responsible, Contextually relevant, and Value-Based Management Institute of National Reckoning by meeting the growing and emerging needs of industry and business through contemporary innovative management Teaching, Training, Research and Consulting.

## MISSION



We intend to provide and develop the capabilities of the young managers by raising their level of competence and intellect to face various challenges in the global environment. In pursuit of excellence, we provide training and development services, foster research and disseminate knowledge through publication of books, journals and magazines for the development of society at large.

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We, at Jaipuria Institute of Management, Ghaziabad dedicate ourselves to providing High Quality education in Management and Software and to promote Indian values, positive attitude & Team Spirit amongst all students, faculty and staff members.

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