

# IJMIR

## INTERNATIONAL JOURNAL OF MANAGEMENT ISSUES AND RESEARCH

Volume 10, Issue 1

January-June 2021  
ISSN : 2320 - 1177

A REFEREED JOURNAL PUBLISHED BY  
SCHOOL OF BUSINESS STUDIES



**SHARDA**  
**UNIVERSITY**  
*Beyond Boundaries*



**IJMIR**  
**International Journal of Management**  
**Issues and Research**

**Volume No. 10**

**Issue No. 1**

**January - June 2021**

# IJMIR

## International Journal of Management Issues and Research

### AIM and SCOPE

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International Journal of Management Issues and Research (IJMIR) is a refereed journal published by the School of Business Studies, Sharda University. It is an academic and a peer reviewed International Journal.

The Journal aims to:

- Disseminate original, theoretical, or applied research in the field of management and its allied areas.
- Publish original, industry-relevant research to reduce the academia-industry gap.
- Seek original, unpublished research based on theory, empirical analysis as well as experimental works for publication.
- Publish strong research in the field of Commerce & Finance, Sales and Marketing, HR and OB, Business Communication, Operations and SCM , IT & Business Analytics as part of Management as a field of Study and also in Healthcare management, as well as other interdisciplinary fields of management.

#### SCOPE

The scope of International Journal of Management Issues and Research (IJMIR) includes all domains that are listed above and wishes to include emerging themes and also action oriented research. The journal also welcomes focused discussions , cases , monographs and interview papers, and book reviews.



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## **From Chief Editor**

Greetings from the Editorial team!!

It is my privilege to share with you the current edition of our Journal in the year 2021.

The year 2021 started well but was gripped by another spell of covid virus and we had to sit back and hold our general and academic pursuits. The main focus was focused on pandemic related issues and how to cope up with it.

This issue is highlighted as an interdisciplinary research focus in management and presents interesting articles from authors across India.

We present to you a collection of research papers, case studies and popular articles. We hope that the contents in this journal will help the reader/decision-maker to have a better understanding of the policies and decisions with a wider perspective and also serve as a comprehensive resource for researchers, academicians and practitioners.

This Volume 10, Issue 1, have articles varied in terms of their context and description where our editorial team has tried to amalgamate diverse thoughts of the scholars. We have also added a section on “Perspective” where the opinion and views of the industry is presented.

We hope you will find this issue useful for your research and academic endeavors.

**Best Wishes,**

**Dr Subir Ranjan Das**

Chief Editor

**Message from the Managing Editor  
(Chairperson – Editorial Committee)**

Dear All,

I am happy to share with you this year Edition of our International Journal of Management Issues and Research, Volume 10, Issue No. 1, Year 2021.

This issue is focusing on the interdisciplinary nature of articles from pan India authors and their assessment of things happening in pre and post covid duration in India and abroad. This issue contains articles that will highlight future aspects of energy efficiency, Netnography research on homestays, changing patterns of sex ratio and its impact, khadi industry and also on Ethiopian export promotion. The section on perspective constitutes short articles on AI, digitalization, food industry, social media impact and also on pros and cons of adopting Industry 4.0 and quality issues.

Our sincere thanks to all the contributors for their continued support and interest. I also thank all the Journal committee members and assistance from Phd scholars for their time and energy to review the articles and to select them.

We again request all academicians, researchers and practitioners to send their unpublished articles and papers for publication in our Journal.

**Best regards,**

**Dr. Manmohan Rahul**  
Professor  
School of Business Studies  
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# IJMIR

## International Journal of Management Issues and Research

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# A NETNOGRAPHIC ANALYSIS OF TOURIST PERCEPTION TOWARDS HOMESTAYS IN UTTARAKHAND, INDIA

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## **Abstract**

The homestays have been gaining popularity in recent times because of the authentic experience provided to the tourists. The aim of this study was to examine the perceptions of tourists regarding homestay experience. The study was conducted about the homestays in the Uttarakhand state of India. A qualitative method was adopted for the study as it helps to understand the feelings and emotions of people in a better way. The technique of Netnography was applied for the study. The data was collected through Trip Advisor and analysed by NVIVO. The investigation resulted in four themes that explained the perceptions of tourists with reference to their feelings, host, aesthetics, and settings of a homestay. Implications and limitations are presented towards the end of the study.

## **Introduction**

Homestay is a tourism product that has the potential to attract tourists because of its ability to enhance knowledge and provide a holistic experience, observe, experience and learn about the way of life of the local residents of their destinations. (Anand et al., 2012; Shukor et al., 2014). Homestay is a kind of alternative accommodation that is generally run by the local community. In recent years, the concept of homestay has gained popularity because of the benefits it brings to the locals, along with providing an authentic experience to the tourists. It gives a relaxed and comfortable stay to the tourists and gives them a feeling of a home away from home. The locals benefit from homestay as it increases income and employment opportunities, encourages women empowerment, preserves local nature and culture, and enhances social sustainability (Based et al., 2018; Kannegieser, 2015). Looking at these benefits, various State Governments in India are encouraging homestays in the rural and remote areas by providing land, subsidies, relaxation in taxes etc.

Considering the exponential growth in the popularity of homestays, especially amongst the urban population, a study on tourists' perceptions regarding their homestays

experience becomes essential. In this light, the purpose of this study was to analyse tourists' perceptions towards the service quality, infrastructure and experience of the services they consumed in a homestay. This study is important for destination managers and homestay owners because they can understand the customers' needs and yield more benefits by improving the services which are not perceived positively by the tourists.

## **Review of Literature**

Community-based tourism (CBT) allows local communities to efficiently manage tourism resources, allowing communities to maintain their living environment without having a long-term harmful impact on the environment (Hussin & Kunjuraman, 2014). Additionally, CBT development allows local communities to highlight and develop tourism's economic, social, and cultural components. CBT promotes a "balanced and harmonious" development style between tourism and other aspects of the local economy; cultural and environmental development quality; and catering to local populations' diverse needs, welfare, and potentials (Baiquni & Dzulkifli, 2020; Binnui & Iamsa-ard, 2016).

In tourism marketing literature, the topic of destination image has gotten a lot of attention. Destination image has been characterised in a variety of ways by researchers, but it is widely regarded as a complex construct (Chahal & Devi, 2015; Zhou, 2014). The definitions of destination image concentrate on a person's overall impression of a location. A destination image is a collection of impressions, ideas, expectations, and emotional feelings about a location. It also shows the associations and bits of data associated with a location. In several conceptual frameworks clarifying tourists' decision-making process, the destination image is regarded as a critical influencing aspect.

Tourists make purchasing judgments based on mental impressions of specific locations (Mohamed & Mensah, 2011). Three elements are regarded to make up the

qualities of a goal image: cognitive, affective, and conative. Tourists' evaluations of the destination's perceived features are reflected in cognitive appraisals of the place, including beliefs and associated information. The emotive picture component represents tourists' emotional responses or assessments of the destination (Joppe et al., 2001). Visitors' active consideration of a place as a potential trip destination is described by the conative image component, which depicts a desirable future state that tourists aspire to experience for themselves.

Any statements, discussions, or opinions regarding a product, service, company, or object that may be found on the internet are referred to as EWOM (Abubakar et al., 2017; Yacoub & Hamouda, 2018). This notion heavily influences customers' behaviours concerning social networking sites. It's difficult to assess the quality of services before they're used because of their intangible character (Ladhari & Michaud, 2015). As a result, buyers frequently use eWOM on the internet to gather information before making purchasing selections. A positive word of mouth increases the likelihood of purchasing, while a negative word of mouth decreases it (González-Rodríguez et al., 2016).

**Methodology**

Uttarakhand is a state in India known for its alpine peaks, meadows, rivers, flora and fauna. The state is dotted with numerous homestays run by the local community. The tourist demand for homestay accommodation is high because of the authentic experience provided by the locals. To better understand the perceptions of the tourists regarding their experience in a homestay, a qualitative research method was considered appropriate (Braun & Clarke, 2016; Caldas, 2009). The qualitative method is convenient and apt when the objective of the study is to analyse the perceptions, experiences or behaviour of the people. To operationalise the study, the netnographic method of research was chosen as a research technique (Kozinets, 2010). Netnography is a form of online ethnography where the detailed information regarding perceptions and experiences of consumers is collected through online resources like blogs, reviews and other internet sources. Netnography is faster, less expensive and cheaper than traditional ethnography and provides unobstructed and naturalistic data.

Kozinets's (2002) procedure of netnography was adopted for this study. Firstly, the online communities were identified that provided the most relevant information about homestay tourist perception. In this case, TripAdvisor was selected as the most suitable platform for data collection. Only those reviews were chosen that provided a detailed description regarding experience at a homestay. Reviews less than 50 words were excluded. A total of 183 reviews posted between September 2019 to December 2019 were selected for analysis. Reviews written in the English language were selected for increasing the reliability as the authors are not aware of

other foreign languages. The final data after cleaning consisted of 141 reviews. The spelling and grammar mistakes in the reviews were not corrected in the presentation of the analysis so as to maintain the essence of the narratives.

The final reviews were carefully examined by the authors. NVIVO was used to generate word cloud and word trees. The narratives and word clouds were then analysed to arrive at final themes for the purpose of presenting the findings.

**Findings and Discussion**

Starting with the procedure of word cloud, an overall perception of tourists regarding homestays was assessed. The most frequent words extracted through NVIVO word frequent query are presented in Figure-1. The words are further matched to a common dimension for the purpose of presentation. "Family", "home", "homely", "stay", "host" are associated with *Theme-1 Social interactions with the host family*. "Village", "nature", "river", "trail", "view" are associated with the *Theme-2 Naturalistic location of the homestay*. "Amazing", "friendly", "wonderful", "good", "comfortable", "enjoy" etc. are associated with *Theme-3 Feelings of the tourists*. Lastly, words like "food", "cottage", "property", "rooms" are associated with *Theme-4 Aesthetic features of homestay*. A detailed discussion of each theme as per the above analysis is presented as under.



*Figure-1 Word Cloud associated with tourist perceptions of homestay*

***Theme1-Social interactions with the host family***

The interaction with the host family was one of the most important dimensions that emerged out of the narratives. The warm and hospitable experience provided by the host family was perceived very positively by the tourists. The host family acted as a bridge between the destination and the guest and helped the tourist in experiencing the real authentic side of the destination. The homestay owners were also friendly with the pets of the guests that exceeded the guest expectations. This is a feature that is generally not found in most hotels. The caring attitude, wonderful and exceptional behaviour of the hosts had an impact on the loyalty and recommendation parameters of the tourist behaviour. The same can be seen in the following narratives:



“The host Sumit and leena were like family. The staff were courteous, helpful all time. the ambience and fireplace gave a feeling of the true homestay.”

“The host, Prashant is super helping. I was feeling just like it's my home. He took care of every single thing.”

“Naveen and Kamala define what Indian hospitality is all about. They are great hosts. The weather was around 3 degrees. I explained over phone that we were not used to that temperature. Naveen offered to provide heaters. When I was there I realised that he had pulled out the heater he had for his small daughters and given it to us.”

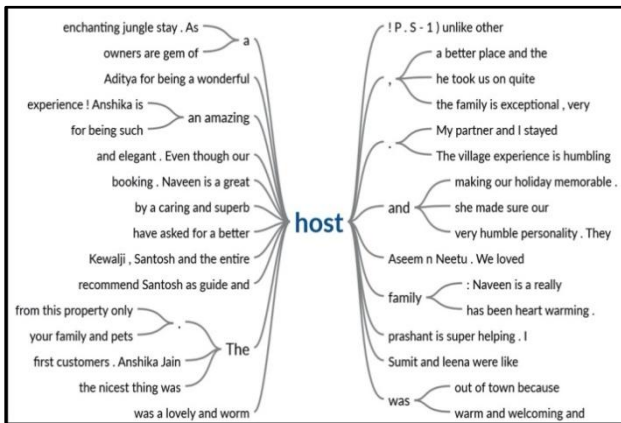


Figure-2 Word Tree: Host

**Theme 2- Naturalistic location of the homestay**

The next dimension that emerged out of the analysis of reviews was the naturalistic location of the homestay. Words like open area, lawn, river, valley, mountains, forest, panorama, hills and Himalayas frequently appeared in the selected reviews. This indicated that the tourists felt that the location of the homestay in a scenic location like a nearby river, with a view of mountains or amidst the forest, gave them a better experience. The guests also talked about the large windows and the views from the homestay that increased their overall experience. The tourist reported that the busy urban life had dented their well-being and mental state, and they could rediscover self while staying in the homestays amidst natural settings and with the company of friendly hosts. Some of the statements expressing tourist perceptions regarding the location of the homestay are as below:

“We were treated with rhododendron n sebachthron juice for refreshments. They arranged for our treks in the region.. This is a true Himalayan homestay that will give you a close look at the life in the mountains and the colorful culture of people living at high altitudes. The family itself is very welcoming and friendly.”

“A home away from home. The location of this cottage is in between the mountains, but it's near to the shops so don't worry if you forget some essentials. The view

from from this house is really awestruck, early morning you get to see the trishul ranges and nanda hills.”

“Rolling hills, fresh water spring and river in front , a forrest across. Prefect recipes, almost too good to be true. That goes for the location. The property itself is beautifully imagined and executed. Passionately run by the owner himself , it is a homestay at its best. Something that cannot be matched by star hotels.If long walks, birds, trees, gurgling streams , relaxation are your buzzword for a holiday, don't miss it.”

“The location of the cottage was surreal, being situated on the edge of the hill, one could enjoy the panoramic view of surrounding forest and the valleys below, nothing like the enchanting sunsets that I got to witness there just from outside of my cottage.”

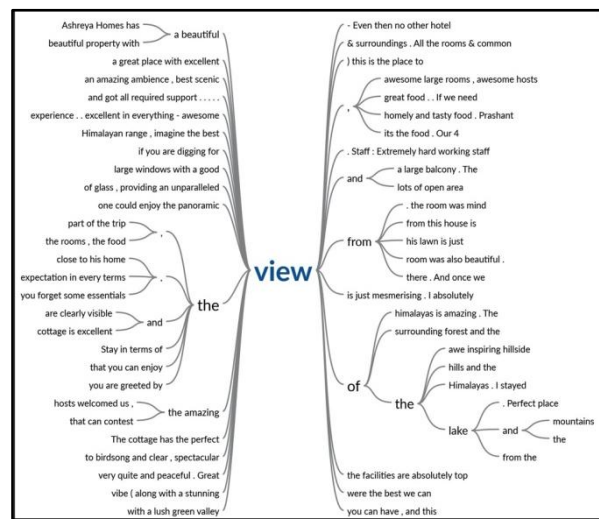


Figure-2 Word Tree: Location and View of Homestay

**Theme-3 Feelings of the tourists regarding experience**

This dimension that emerged out of narratives was the feelings of tourists regarding what they experienced in a homestay. A large number of reviews mentioned the affective dimension of their feelings regarding the homestay accommodation experience. Words like wonderful, memorable, amazing, excellent, awesome, great, comfortable, humbling, awe-inspiring and safe were some of the emotions mentioned by the guests in the reviews. These depict the perceptions of tourists regarding the positive emotions they felt while staying in the homestay. The following narratives illustrate these aspects:

“I also did not stay in this home stay guest house, but did stay in the village of Dalar and it was just a wonderful location and experience. The village is small, quiet and it has really such lovely views.”

“Every thing from comfort to hygiene is all well maintained, the property is far away from city husle and surrounded with lush green forest. It was an memorable

## A Netnographic Analysis of Tourist Perception Towards Homestays In Uttarakhand, India

experience with Mr Aseem and his wonderful wife, very warm couple and great company.”

“All my wishes came true. The warmth with which the hosts welcomed us, the amazing view of the lake from the property, the beautiful property itself, Auntie's amazing hospitality, and cooking, all these made our stay memorable. Rain was the icing on the cake.”

“With spectacular views and service, it was one of the most comfortable “home away from home” stays we've had in a long time! Definitely visiting again!”

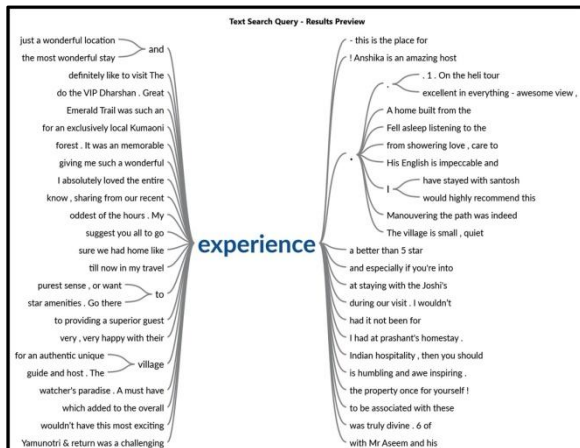


Figure-2 Word Tree: Tourist feelings and experience in a homestay

### 1.1 Theme-4 Aesthetic features of homestay

The sights, surroundings and tangible dimensions always have an effect on guests perceptions and satisfaction. Several features of homestay like vernacular architecture, authentic food, comfortable rooms, view from balconies, local handicrafts and décor, and peacefulness were mentioned by the travellers in reference to their positive experiences. In addition to this cleanliness of the house, traditional settings and welcoming families were also considered important for enhancing the overall experience. Some of the narratives mentioning this dimension are:

“The place, serenity, food, staff, ambience, pets and mother nature all took me by surprise. The photos on the website do not capture the true beauty and the pristine look of Emerald Trail. One has to visit to see. From the intricate care that the staff took for my smallest needs which included less oil and masala in the dinner and lunch, to escorting me around the large property time and again - it was truly appreciative.”

“The trip is still fresh in my mind- from the time we landed in Kathgodam to the scenic drive to Jungaliagaon...to the beautiful biological built of ET, the Hospitable welcome by the staff... our wooden ceiling naturally lit up room...the mountain bike on which we went cycling and felt back like back to school and the

nature walk in the morning was like icing on the cake (chocolate cake)!”

“The house we stayed had all the modern amenities including geyser and yet maintained the tradition settings of wooden doors and windows, fireplace, stone walls and tables to sit outside. The house is very neat and simply but beautifully decorated. Food is purely homemade, clean, tasty and quantity enough for anyone. As for the jungle around, you can see plenty of birds, hear night-jars and barking deers, and, if lucky, can spot a leopard.”

### Relation between positive tourist perceptions and loyalty

The success of any product or service depends on a loyal consumer. Several studies have studied the impact of tourist perceptions on behavioural intentions. It has been observed that positive perception is the result of satisfaction derived from the consumption of the product or service. A positive experience leads to higher satisfaction and a loyal customer who would be willing to return and recommend the tourism product. The same has been observed in this study. The analysis of the narratives resulted into various themes that explained the positive tourist perception associated with several dimensions of homestay accommodation. The narratives also mentioned reviews that stated that the tourists would return and recommend the homestay to others. Some of the narratives illustrating the same are as under:

“If you want a nice, cozy little holiday, then I would definitely recommend Emerald Trail. I intend to return there again.”

“It's not a question of if I will return to their homestay, it's a question of when.”

“The village homestay is one of the best homestays I have stayed at. Been here three times already, and sure to return!”

“It was really nice staying at your place. i had a very pleasing moment with your family and can't wait to come back to your place for my future next vacation.”

“We would really recommend Syat House by the riverside to everyone! We will be back soon.”

“It's a divine abode up in the hills, and I'd definitely recommend it to anyone who's visiting.”

### Conclusions, Implications and Limitations

The tourist experience is a combination of affective, cognitive and behavioural aspects. This study aimed to study the affective aspect of tourist experience and analysed their feelings, beliefs and emotions by analysing tourist reviews on the TripAdvisor platform through the method of Netnography. The study revealed four distinct themes that were linked to setting, feelings, aesthetics and people associated with the homestay. The

effect of tourist perceptions on the loyalty aspect was also discussed. The study has several implications. The destination managers could benefit from the study by understanding the most powerful experience dimension while planning future strategies. Other than this. The present study enhances the literature on the guest-host relationship phenomenon and iterates the importance of personalised services in increasing guest satisfaction. The study also helps in explaining the role of homestays in enhancing the image and brand identity of the destinations because of the authentic experience provided through them.

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# CHANGING PATTERN OF SEX RATIO (1951-2011) OF KOKAN DIVISION AND ITS IMPACTS

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## Abstract

Declining sex ratio is an issue of serious concern in India. The social and economic relationship in a region is affected by the sex composition of the population. An analysis of sex ratio is important for the study of economic study of any region. This study utilizes secondary data. The changing pattern of sex ratio in Kokan region has been calculated from 1951 to 2011 and its impacts has been analyzed. The special pattern of sex ratio in Kokan region has been mapped and the correlation between the sex ratio and the socio-economic factors has been assessed.

**KEYWORDS:** Sex Ratio, impact, remedies, map, changing pattern

## Introduction

The present study is an analysis of sex ratio in Kokan region from 1951 to 2011, the current census. Kokan region is the south western region and the administrative division of the Maharashtra state which have an area of 30,746 sq. km. The population of the region is 5857294, which is 9.28% of the total population of India and 25.46 % of the Maharashtra state. It comprises even districts namely, Mumbai City, Mumbai Suburban, Thane, Palghar, Raigad, Ratnagiri and Sindhudurg are the districts which have the plain area where as the remaining four districts are mainly mountainous.

The Kokan region, along the western coast, is Maharashtra's most populous and prosperous region. The region's capital, Mumbai is home to India's financial, banking and entertainment industries are the state's richest district. Neighbouring Thane district has one of India's highest per capita incomes. The region is known for its Alphonso mangoes and costal fisheries.

## Objectives

The main objectives of the study are-

- 1) To examine the trend of the sex ratio of the Kokan region from 1951 to 2011.
- 2) To find out the relation of literacy and the urbanization with sex ratio.
- 3) To find out district wise spatial distribution of sex ratio in Kokan region.

- 4) To analyze the impact of the declining sex ratio in Kokan region.

## Methodology and Data Collection

In this study the sex ratio of last 60 years is highlighted. The data which has been used in this study is secondary in nature. Statistical abstract of Kokan 2015-2016 and the census handbook of 2011 have been used as the source of the data of the population. A comparison has also been made among India, Maharashtra and Kokan which is presented with descriptive statistics. The Spearman's rank of correlation has been used to show the relation between sex ratio and the literacy and urbanization. The spatial variation in the sex ratio among the districts has also been analyzed with the help of the arc GIS 10.2. The fourth objective has been fulfilled by the review of literature.

## Study Area

The administrative division of Kokan has been selected for the study which is situated between 72.8384° E longitudes and 18.9881° N latitude.

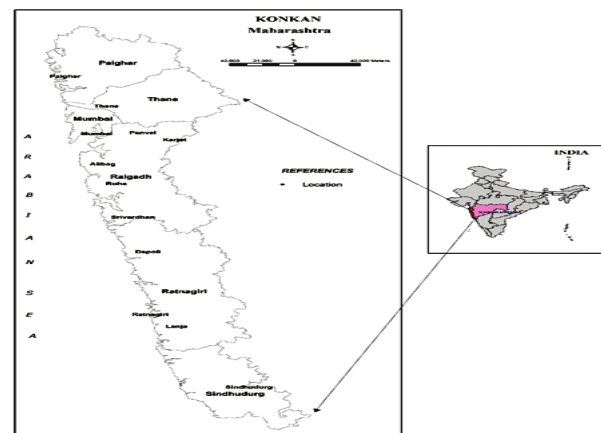


Figure-1: A map of Kokan with its sub components

Maharashtra is the South west state of India which is divided into six administrative divisions, i. e. Amravati, Aurangabad, Kokan, Nagpur, Nashik and Pune. In this research paper we have selected Kokan region for our study. Kokan is famous for many of its largest cities. Every year a large number of travelers visit Maharashtra, mainly in Kokan. It occupies an

## Changing Pattern of Sex Ratio (1951-2011) of Kokan Division and Its Impacts

area 30,746 sq.km and extends from Sindhudurg districts in the south upto Palghar in the north. According to the census 2011, it has a population of 5857294.

### Discussions

#### A Comparison Between the Changes in the Sex Ratio of Kokan Region and India

Table 1 indicates the analysis among the Kokan division, Maharashtra and India from 1951 to 2011. In 1951, the sex ratio of Kokan region was more (948) to the ratio of the country (946). The highest sex ratio was recorded in 1981 while the lowest sex ratio in Kokan region was recorded in 2001, although the overall population declined in the year 2001. But it showed the improvement (except 2001) while in the same duration the sex ratio was in the decreasing order in India. Study also shows that from 1951, there was a point when the sex ratio of the Kokan region surpassed the sex ratio of India. In the year 1951 to 2011 the sex ratio of Kokan region was continuously higher than the country but up to 2011, it was in ascending order so was the Kokan region. In 2001, it was 943 which were quite lower than 1991 but greater than the national average of 933. According to the census 2011 India has recorded the (7) increase while the Kokan division recorded it as also 7 from the 2011 census.

Decadal comparison among India, Maharashtra and Kokan region

Year	1951	1961	1971	1981	1991	2001	2011
<b>India</b>	<b>946</b>	<b>941</b>	<b>930</b>	<b>934</b>	<b>926</b>	<b>933</b>	<b>943</b>
Increase/Decrease		-5	-11	4	-8	7	7
<b>Maharashtra</b>	<b>941</b>	<b>936</b>	<b>930</b>	<b>937</b>	<b>934</b>	<b>922</b>	<b>925</b>
Increase/Decrease		-5	-6	7	-3	-12	3
<b>Kokan</b>	<b>948</b>	<b>968</b>	<b>978</b>	<b>988</b>	<b>977</b>	<b>943</b>	<b>950</b>
Increase/Decrease		20	10	10	-11	-34	7

Source- Statistical Abstract of Maharashtra 2014-2015 (Table-1)

#### A Comparison Between the Changes In The Sex Ratio of Kokan Region and Maharashtra

If we compare the sex ratio of Kokan region and Maharashtra it indicates that since 1951 the sex ratio of Kokan was more than that of Maharashtra. It was highest in 1981 (988) and lowest in 2001 (943) in Kokan. 1951 was the year when the sex ratio of the Kokan region and Maharashtra is a 7-point difference. During 1981 to 2001 the gender ratio declined both in Kokan and Maharashtra but it was more than sex ratio of Maharashtra. After 2001 there was an increasing trend in the sex ratio of Kokan which was 950 and 925 respectively. But the sex ratio of Maharashtra was below that of Kokan.

#### Changes in the sex ratio within the districts of Kokan region:

Table 2 indicates that the sex ratio in all the districts of Kokan has decreased from 1951 to 2011 except Mumbai (Suburban) and Mumbai. There is an increase of sex ratio in Mumbai (Suburban) and Mumbai districts. The sex ratio has always been in 4 digits during 1951 to 1991 in Ratnagiri, Sindhudurg and Raigarh district. Kokan region is the only two districts Mumbai (Suburban) and Mumbai where sex ratio is very low. In 2011 Ratnagiri and Sindhudurg have recorded their highest sex ratio in 110 years

Year	Ratnagiri	Sindhudurg	Raigarh	Thane	Mumbai (Suburban)	Mumbai
<b>1951</b>	1,399	1200	1040	920	712	574
<b>1961</b>	1264	1194	1058	919	744	626
<b>1971</b>	1263	1213	1056	894	769	670
<b>1981</b>	1258	1205	1046	883	801	729
<b>1991</b>	1205	1137	1010	879	831	791
<b>2001</b>	1136	1079	976	858	822	777
<b>2011</b>	1123	1037	955	880	857	838

Source- Statistical Abstract of Maharashtra 2014-2015 (Table-2)

#### Trends of sex ratio of the Kokan Region from 1951 to 2011

##### 5.5) a. Sex ratio during 1951-1981

If we look at the figure 2, it is very clear that there is highest sex ratio of Kokan region. From 1951, there is a rise in the sex ratio in 1911. In the year 1971 there is an increase of 10 points and rise of 10 points in 1981. However, there is a decreasing order in the sex ratio of the Maharashtra state (except 1951) during this period of time. In 1951, the sex ratio was about 941 which decrease to 937 by 1981. A continuous fall in the sex ratio of India is quite visible in figure 2.

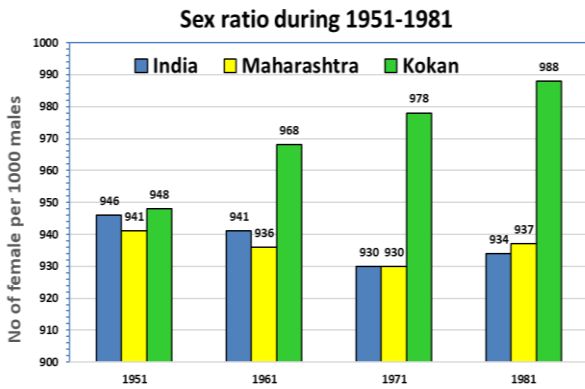


Figure-2

**b. Sex ratio during 1991-2011**

Figure 3 indicates that after 1991 there is decreasing trend in the pattern of sex ratio of Kokan region in this time period (exception 2011). It increased by 7 points during three decades. If we look for the highest sex ratio of Kokan region, it becomes clear that it was in 1981 when sex ratio of Kokan was 988 which was the highest number of the selected period. If we look at the Figure 3, it is pointed out that there is also decreasing trend in the sex ratio of Maharashtra. It was 922 in 2001 and increased upto 925 by 2011 but it declined in the 2001. In the initial three decades of the duration recorded the decreasing trend however, in the last four decades witnessed an increasing trend in the sex ratio.

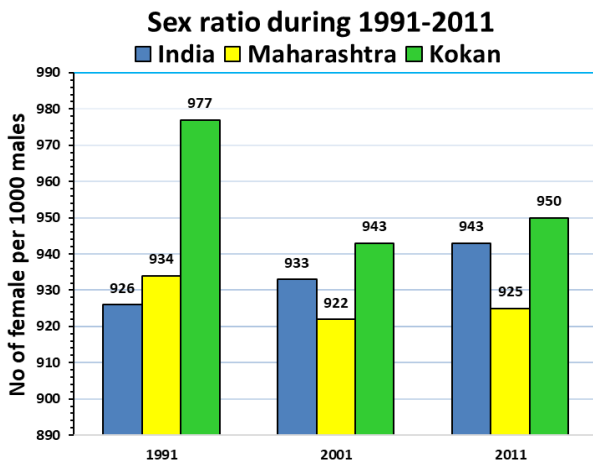


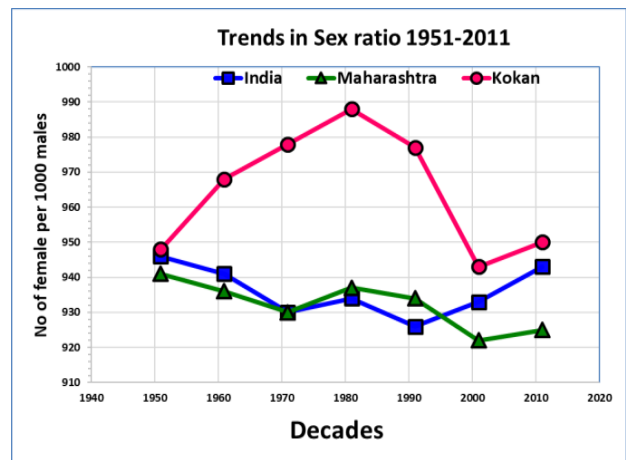
Figure- 3

**c. Overall Trend of the sex ratio: India, Maharashtra & Kokan Region**

Kokan as a region witnesses a fluctuating trend in the overall sex ratio and has an overall inverted U shaped curve depicting the trend. The lowest sex ratio was recorded in selected period was in 2001 while the highest sex ratio was observed in 1981. In 2011 the numbers of the females are a mere 50 less than of the males. Figure no 5 indicates that the sex ratio of Maharashtra has improved gradually during the selected period of 70 years. It was lowest in 2011 (922) and highest in the year 1951 which is a negative indicator for the

state. If we look at the overall trend of the sex ratio of India it is quite visible in Fig. 5 that there is a continuous fall in it and after 1991 its rise again.

Figure-4: Trends in Sex ratio 1951-2011



**Special pattern of the Literacy rate in Kokan region**

The overall literacy rate of Kokan region is 85.75%. But it fluctuates from one district to another district from 82.18% to 89.91%. All the districts are categorized into 3 groups as follows.

**a. Low Literacy rate-** the districts which have the literacy rate below 84 % are included into this category. Low literacy rate is found in Raigarh and Ratnagiri.

**b. Moderate Literacy rate-** In this category the districts which have the literacy rate between 84 to 86 % are included. Thane and the Sindhudurg district are considered into this category.

**c. High Literacy rate-** Mumbai and Mumbai (Suburban) districts have the highest sex ratio. In this category the districts which have the sex ratio above 89% are included.

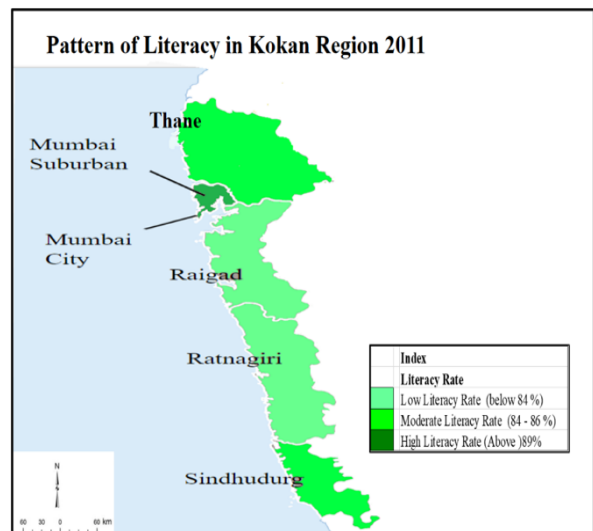


Figure 5: Pattern of Literacy in Kokan Region: 2011

## Changing Pattern of Sex Ratio (1951-2011) of Kokan Division and Its Impacts

Correlation between sex ratio and the literacy

$$P = 1 - 6\sum d_i^2 / n(n^2 - 1)$$

$$= 1 - 6 * 59 / 6(6^2 - 1)$$

$$= 0.6857$$

The correlation between the sex ratio and the literacy is 0.6875 in Kokan region which indicates that there is highly positive correlation between these two. If the literacy increases the sex ratio will be increased.

Sr. No	District	Sex Ratio (2011)	Rank	Literacy Rate	Rank	D	D <sup>2</sup>
1	Mumbai (Suburban)	857	5	89.91	1	4	16
2	Mumbai	838	6	89.21	1	5	25
3	Sindhudurg	1037	2	85.56	2	0	0
4	Thane	880	4	84.53	3	1	1
5	Raigarh	955	3	83.14	4	-1	1
6	Ratnagiri	1123	1	82.18	5	-4	16
		N=6					$\sum D_i^2 = 59$

(Table-3)

### Spatial Pattern of the Urbanization in Kokan Region

The overall urbanization in Kokan region is 57.12 % in 2011 which varies with in the districts from 12.59% to 100.00 %. The spatial pattern of the urbanization is given below-

#### a. Low Urbanization

In this category Sindhudurg and Ratnagiri districts are included where the urbanization is very low, 16.32% and 12.59 % respectively. The low connectivity of roads and the rugged mountains discouraged the urbanization in the area.

#### b. Moderate Urbanization

Thane and Raigarh districts fall under this category. The percentage of the urbanization in these districts is 76.98% and 36.83% respectively.

#### c. High Urbanization

There are two districts where the urbanization is very high- Mumbai and Mumbai (Suburban). Proper transport network and the plain terrain encouraged the high urbanization in this area. Mumbai and Mumbai (Suburban) district has the highest urbanization of the region which is 100.00 %.

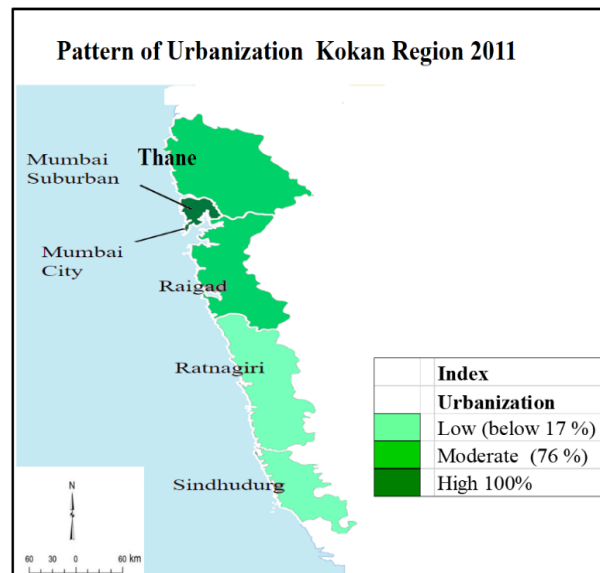


Figure -6 Pattern of Urbanization in Kokan Region: 2011

### Correlation between sex ratio and the Urbanization

The correlation between sex ratio and the urbanization is -0.8, indicating that urbanization and the sex ratio are negatively correlated. Thus, as the urbanization increases the sex ratio decreases automatically.

Formula of the correlation

$$P = 1 - 6\sum d_i^2 / n(n^2 - 1)$$

$$= 1 - 6 * 63 / 6(6^2 - 1)$$

$$= -0.8$$

(Table-4)

Sr. No	District	Sex ratio	Rank	Urbanization	Rank	D	D <sup>2</sup>
1	Mumbai (Suburban)	857	5	100.00	1	4	16
2	Mumbai	838	6	100.00	1	5	25
3	Thane	880	4	76.98	2	2	4
4	Raigarh	955	3	36.83	3	0	0
5	Ratnagiri	1123	1	16.32	4	-3	9
6	Sindhudurg	1037	2	12.59	5	-3	9
7		N=6					$\sum D_i^2 = 63$

Figure 7 Pattern of Sex Ratio Kokan Region: 2011

### Special pattern of the sex ratio in Kokan

According to the census 2011, the sex ratio of the Kokan region is 948. If we go through table 4 it is pointed out that the sex ratio of whole Kokan varies from 838 to 1123 from one district to another district. All the districts of



Kokan can be categorized into 3 groups.

**a. Low Sex Ratio**

The districts which have the sex ratio below 957 are included in this category. Mumbai and Mumbai (Suburban) districts have the sex ratio is 857 and 838.

**b. Moderate Sex Ratio**

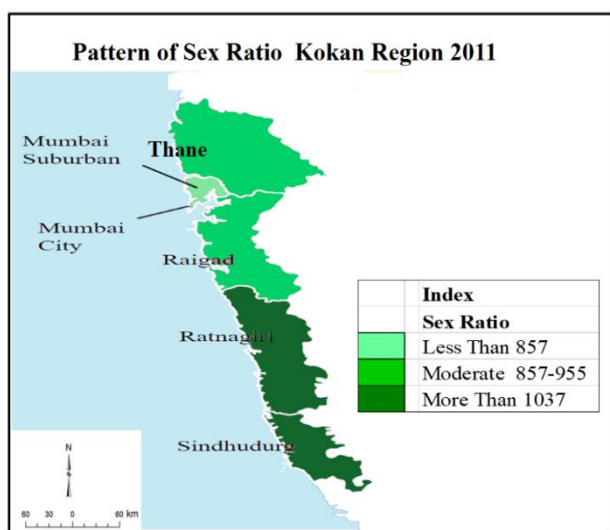
The districts which have the sex ratio between 880-955 are included into this category. Thane and Raigarh have the moderate kind of sex ratio.

**c. High Sex Ratio**

The districts which have the sex ratio above 1037 are included into this category. The high sex ratio has been recorded in the districts of the Ratnagiri and Sindhudurg districts.

Sr. No	Categories	Districts
1.	Low sex ratio	Mumbai, Mumbai (Suburban)
2.	Moderate sex ratio	Thane, Raigarh
3.	High sex ratio	Ratnagiri, Sindhudurg

Source- Census handbook 2011 (Table -5)



**IMPACT OF THE DECLINING SEX RATIO ON KOKAN REGION**

1. The excess of males tends to lowering age of the marriage of the female (22.17 Annual Health Survey 2010-2011) which may lead to increased fertility and population growth.
2. An adverse sex ratio leads to the social emergence of many social and moral evils like rape and prostitution.
3. It also witnessed in human development report (2018) on gender in equality index that India was placed in the

130<sup>th</sup> rank which depicts the significance of gender discrimination.

**RESULTS**

If we look at the overall trend of the sex ratio in the region it indicates that there is an increase in the sex ratio from 1951 to 2011 in the region. But it fluctuating over the decades under the purview of our study. If we look at the distribution pattern of the sex ratio it shows that there is low sex ratio in the more urbanized districts of the Mumbai and Mumbai (Suburban). There is high sex ratio in the middle districts of Kokan region. The correlation between the sex ratio and the literacy rate is highly positive which signifies that the areas where the sex ratio is high tends to have better education. There is a strong negative correlation between the sex ratio and the urbanization which indicates that if the urbanization will increase the sex ratio will deteriorate and vice versa. However, since correlation is not indicative of causality, we recommend future scholarly efforts to probe the root cause behind this intriguing phenomenon.

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# ENHANCING ETHIOPIAN EXPORT COMMODITY MARKET THROUGH LENS OF MARKETING STRATEGIES BY GOVERNMENT AND FIRMS

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**Abstract**

Export plays a major role in the economic development of a country. The benefit derived from export is also increases in the globalized world. Ethiopia as one of the emerging economy country faces problems in the export performance of its major export commodities such as coffee, khat, oil seed, leather and textile products, and horticulture sub sector. Factors related to FDI, GDP, real effective exchange rate, export promotion programs, international standard certificates, infrastructural developments, export policies of the government, marketing strategies of firms landlockdness of the country, lack of potential market, lack of skilled marketing personnel's and technological advancement are the major inhibitors of the export performance.

Therefore, Ethiopia needs to concentrate on structural problems and policy issues in order to benefit from FDI and enterprises in these countries also should give priority to human resource and R&D. With respect to its land lockdness the country can improve its export performance by creating a more trade-friendly environment through lowering tariffs and entering into regional trade agreements.

Flexibility in exchange rate fluctuations in keeping with economic fundamentals, improved domestic economic performance, attracting export-oriented investments would also contribute to export growth, and diversification of commodities. In other cases, in order to increase the performance of country's export market, businesses must participate in export promotional activities such as trade exhibits, trade missions, and trade affairs.

**Introduction**

Ethiopia as one of the emerging economy country and its economy is mostly based on agriculture and hence agricultural products have dominated Ethiopian exports for a long time. As a result, Ethiopia's external trade is marked by high sectoral (agricultural) and commodity (coffee) concentration.

Export item	Contribution in dollar (2016/2017)	Market Destination
Coffee	881	America, Asia and African countries
Vegetables (snow peas, broccoli, asparagus, okra, cabbages)	538	African countries
Oilseed (sesame seeds, mustard, pumpkin, sunflower, rapeseed, castor seed, and groundnuts)	446	European countries
Live trees and flowers (ornamental foliage, bulbs, roots and cut flowers)	221	America, Asia and African countries

(Source: World atlas.com)

Fig 1. Top agricultural export commodities of Ethiopia (million US\$)

However, the export performance of this emerging economic countries faces many challenges. Some of the challenges are FDI, GDP, foreign exchange rate, quality standard certification, export promotion programs, landlockdness, export market strategies, aid for trade (AfT) and firm's internal characteristics, which play a major role.

Ethiopia as a country faces similar problems in the export performance of its major export commodities such as coffee, khat, oil seed, leather and textile products like all Agri based economies. Further factors related to infrastructural developments, export policies of the government, marketing strategies of firms landlockdness of the country, products characteristics, lack of potential market, management commitment and lack of skilled

marketing personnel's and technological advancement

are the major inhibitors of the export performance.

Export Items	1996-2000	2001-2005	2006-2010	2011-2015	2016-2018	%
Coffee	2,233,458	1,832,048	4,512,238	14,216,725	24,108,457	29.07
Oilseeds	191,525.80	547,770.90	1,869,299	8,860,028	9,718,973	15.50
Gold	183,724.20	365,970.80	1,381,086	8,723,212	4,467,630	11.33
Chat	262,018.20	610,545.50	1,349,846	4,811,151	6,169,305	9.12
Pulses	89,942.07	205,348.10	979,743.50	3,689,298	6,095,930	7.33
Flower	0	17,539.49	1,073,358	3,510,759	5,208,463	6.56
Leather products	311,832.90	503,441.80	770,864.80	2,181,861	2,812,965	4.64
Live Animals	8,478.87	28,019.09	531,210.20	3,101,145	2,045,384	4.16
Textile	0	27,596.11	157,262	1,660,928	2,111,165	2.64
Meat products	26,007.38	47,479.56	240,954.70	1,404,660	2,301,074	2.63
<b>Total</b>						<b>92.98</b>

(Source: NBE 2018 Annual Report Annex)  
Fig 2. Top export commodities (million Birr)

Since export plays a major role in the economic development, emerging economy countries must also compete by maximizing their export performance in the international market to enhance their economy. Exporting is still the most popular way of entry into international markets, as well as a critical commercial activity for a country's economic health, as it contributes considerably to employment, trade balance, economic growth, and a higher standard of life (Wei et al., 2014; Lee and Habte-Giorgis, 2004).

Therefore, the importance of a proactive marketing approach in determining export performance has to be stressed enough which means export marketing strategy should be stressed as a key predictor of export issues.

#### **Export product diversification in Ethiopia**

The Ethiopian export market has a high level of product diversification, with the majority of exports containing value adds, indicating that, while conventional commodity exports still account for the majority of export earnings, new export items are fast entering the market. The government's export emphasis, such as constructing industrial zones, a favorable environment to entice foreign investors to invest only for exports (an exporting firm obtains tremendous benefits from the government), and certain supply-side reforms, are driving this dynamism.

Despite the fact that main export commodities have risen output levels as a result of various institutional and structural reforms, there are still capacity challenges to improve exports, i.e., hurdles to lower trade costs and ensure economies of scale benefits. With respect to product diversification and market destination the majority of products are not sent to the former destinations, and the value of exports is quite low. Because the majority of these destinations are African countries, new products such as other vegetables, vegetable mixes, veterinary medicine vaccines, raw hides and skins (of goats or children), carcasses and half-carcasses, vehicle parts and accessories are becoming increasingly popular. This is due to the fact that the

items are new and have stronger comparative advantages, and Ethiopia has a large market for these export products. However, promoting new places necessitates a significant expenditure in advertising.

#### **Export Market Strategy of Ethiopia**

Ethiopia's Development Strategy has two main goals. The first is to encourage rapid economic growth in a macroeconomic environment that is stable and to improve Ethiopia's economic integration with the global economy. The promotion of exports has received special attention in this attempt. As a result, a strategy for increasing and diversifying the country's exports has been established.

Ethiopia's long-term development strategy is focused on Agriculture-Led Industrialization (ADLI). Agriculture will drive Ethiopia's economic growth over the next two decades, according to this plan. The consequence is that agriculture will set the pace of economic expansion, both directly through its contribution to GDP growth and indirectly as a market for the rest of the economy. Ethiopia is the second large exporter after Egypt in export performance in Africa which has more similarity in Export of goods and services which mainly base in agricultural products.

#### **Future of Ethiopian Export market**

Ethiopia's economy has grown at one of the fastest rates in the world in recent years, and foreign financial institutions and the government expect the economy to continue to expand at a rapid pace. Ethiopia benefits from a variety of preferential trade agreements as a least developed country (LDC), which give its products almost duty-free and quota-free access to markets in many developed and developing countries.

The government is focusing on completing critical infrastructure projects, particularly in energy generation and road and rail transportation, as well as enabling export-oriented foreign direct investment (FDI) in new industrial zones, to improve the country's export market performance. These industrial zones are designed to

stimulate manufacturing and export-processing operations by simplifying regulations, giving tax benefits, and providing preferential financing and foreign exchange access.

### **Conclusions and Recommendations**

A company's marketing performance is influenced by four variables: firm characteristics, product characteristics, industry characteristics, and export market factors. There is also long causal relationship between FDI, GDP, and export therefore Ethiopia needs to concentrate on structural problems and policy issues in order to benefit from FDI. The government must take proactive steps to encourage local businesses to collaborate with FDI in terms of input supply and services. Ethiopia's government must ensure that appropriate knowledge and technology transfer takes place. Enterprises in these countries also should give priority to human resource and R&D.

With respect to land landlocked effect of the country the government trade policies and trade relations agreements play an essential role in maximizing the country's export performance by establishing a shared infrastructure and managing transportation networks.

In other cases, flexibility in the exchange rate movements is in line with the fundamentals of the economy, strengthening the performance of the domestic economy, attracting export-oriented investments which would contribute to export growth, and diversification of both commodities and importing countries.

Finally, to increase the performance of country's export market, businesses must participate in export promotional activities such as trade exhibits, trade missions, and trade affairs. To overcome the export dilemma, government policymakers must also develop export promotion programs based on the needs of export enterprises. Other institutions must also collaborate by strengthening international diplomacy negotiations that can improve exporter tax, trade policy, and financial incentives. Foreign offices' human resource skills and knowledge capacity must also be strengthened in order to increase negotiation abilities and boost export performance. The use of digital information flow in order to address problems related to document processing and search for new market and export promotion also plays an important role.

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# PROSPECTIVE KHADI INDUSTRY IN ASSAM FACES ADVERSITY - A STUDY

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**Abstract:**

Khadi, the hand-spun and hand-woven indigenous fabric, once synonymous with the Indian freedom struggle, is now becoming an all-inclusive fashion statement. In the post independent era, Government intervened to develop it. In Assam it has gone through many ups and downs, yet it sustained because of its inherent strength. Khadi is an activity with women monopoly. The objectives of the Study are to assess the status of Khadi in Assam. Khadi Institution in North Eastern Zones are financially weak, their annual turnovers are less, suffer from shortage of working capital. Public fund investment to promote Khadi has remained very scarce and complex to avail. This is not a threat to rural economy alone but to the rich culture and heritage of Assam. The real needs of artisans cannot be ignored. This remains a challenge.

**Keywords:** *Khadi, Assam, Women, Hand-spun*

**Introduction:**

Khadi, the indigenous fabric, once synonymous with the Indian freedom struggle, is now becoming an all-inclusive fashion statement. It is a form of hand-spun and hand-woven fabric that can be found in India, Bangladesh and Pakistan. In a tropical country like India Khadi offers comfort and it can be moulded into any style from everyday wear to formal evening wear (Anita Dongre, Designer). Top designers are highly ambitious about the future of this natural fabric. Designer like Ritu Beri created ceremonial Khadi in 1990. Over time, Khadi has become more versatile, while youth today relate it to the spirit of patriotism at home; it has made its niche globally for its natural environmental friendliness. For Gandhiji Khadi was symbol of self-reliance, sustainability and hard work. For decades it has silently contributed to the rural economy of Assam in a meaningful way. But the contributions of rural women, who are by birth amazing artisans, yet to get recognised appropriately. The history of Khadi in Assam is fascinating. Gandhiji in article *Lovely Assam* said, "Every woman of Assam is a born weaver. No Assamese girl who does not weave can expect to become a wife. And she weaves fairy tales in cloth. Some of the old patterns were of matchless beauty. And as I saw these beautiful patterns, I could not help shedding a silent tear over India's past glory and her lost work" (Young India). In other parts of India Khadi was initiated by Gandhiji as a weapon to fight the British, for rural self-sufficiency,

as an ethical skill, but in Assam meaning of Khadi ran much deeper than that beyond the stretch of time. It is an activity with women monopoly.

In the post independent era, Government intervened to develop Khadi. But in last seven decades this household industry in Assam has gone through many ups and downs. Yet, Khadi sustained itself because of its inherent strength.

**Objectives:** 1. To assess the status of Khadi in Assam; 2. To investigate the socio-economic status of the artisans; 3. To examine if this craft is relevant in the present era of changes and 4. To investigate into the steps taken to strengthen Khadi in Assam;

**Literature Review:**

Khadi an environment friendly pursued in decentralised mode is an apt tool of development. This textile represents India's self reliance, legacy, tradition and pride of rural productivity. Khadi is handspun, hand-woven skin friendly fabrics that breaths. Khadi has a long history. Dating back to the 12 Century A.D. Marco Polo described Khadi of the Bengal region as finer than a spider's web. The Romans were also great admirers of the Bengal Khadi Muslin and used to import great amounts of fabrics. During the Mughal period, the weavers of Comilla, Bangladesh were known for their distinctive skill and were reported by the Tripura Gazetteer in 1890s. Down the lane, the masterly expertise in Khadi got relegated, yet efforts are on in Bangladesh to keep alive the legacy of one of the finest traditions.

**Khadi in Assam:**

Gandhi ji said "Maidens of lovely Assam weave poems on their looms". In Assam it contributes significantly in restoring the age-old rich tradition, her culture and the deep-rooted social fabric. Assam is a land where tea is an industry, handicrafts a major occupation. People in rural areas are mainly engaged in primary sector and sometimes all the family members. As a result, marginal productivity of labour is almost zero or even negative. Although there is hardly any Assamese home where traditional weaving is not connecting their lives officially there are only 7083 registered artisans who are engaged in Khadi activities. They work through NGO



called Khadi Institutions (KI) that receive Government of India funds through Khadi & Village Industries Commission (KVIC).

Though our study focused on Khadi, we quickly update the status of Handloom in Assam which unlike Khadi uses mill spun yarn to weave textiles. As per Handloom Census more than 14.01 Lakh weavers and 11.11 Lakh looms are available in Assam. Besides more than 16.43 Lakh weavers and allied workers work in Handloom sector. Thus about 30.44 Lakh persons involved in Handloom. Assam has the monopoly in the world in respect of Muga, the Golden Silk, production as more than 97 percent of it is produced in Assam. The state has also achieved the right of Geographical Indicator for Muga thread. The state produces about 56 percent of Eri Silk in the country. The total area under Silkworm Food Plants recorded increased to 33790 hectare in 2013-14 from 26826.5 hectare during 2012-13. The production of Silk in the state was 2700 MT and production of Eri raw Silk was 2545.6 MT during the year 2013-14. As per a report the State Department of Handloom and Textiles covers 13576 villages (total villages 26395) under its 209 Handloom Demonstration Circles with 1316163 weavers for its Handloom activities. The 98 Weavers Extension units and 20 Production Centres produced 65.3 thousand metres Handloom fabrics during 2013-14 (Economic Survey of Assam 2014-15).

Government's intervention to promote Khadi in the State rests with KVIC and Assam Khadi & Village Industries Board (AKVIB), two statutory organizations. KVIC was established through an Act of Parliament in 1957 and the AKVIB was through an Act of State Legislature in 1955. These organizations primarily work through KI, which are registered under Society's Registration Act, 1860 and are certified by the KVIC.

From the performances of last decade, we find the status remained more or less static. The findings of Pesala Busenna and A. Amarendra Reddy in "Khadi & Village Industry: A Case Study of KI in India" said "KI in West and North Eastern Region (NER) are financially weak, and their annual turnover is mostly less than ₹30 Lakh. Most of the KI suffer from shortage of working capital" the report said.

History witnesses that the isolation of the NER began earlier as a result of British imperialism, when the Region was cut-off from its traditional trading partners (Bhutan, Myanmar & Indo-China). Still, throughout its history the NER is known to have been an important physical and cultural bridge between India and South East Asia. This isolation imposed on NER has spread deeply adverse affect on pace of development of this Region, her trade routes were snatched without giving serious thought about her prosperity. Defeating these compulsions Khadi is widely accepted in the South East Asian markets.

### **Methodology:**

The study aims at understanding the status of Khadi in Assam. Social science research is an enquiry or investigation with clearly defined parameters. The study is based on primary as well as secondary data. Information from the artisans and organisations were collected pertaining to core indicators. Structured questionnaires were applied. Secondary data was cross-verified wherever possible between various statistics.

### **Universe of Study:**

Although Assam is our Universe to study Khadi, this textile is not woven in India alone but also in Bangladesh and Pakistan. This may remind us that once these nations were a single. If unity motivates us, Khadi could be a common thread that binds us emotionally with deepening attachments. Bangladesh and Assam are geographically contiguous with deep cultural and socio-economic identities among the people.

Assam is situated in the NER bordering seven Indian States and countries like Bangladesh and Bhutan. The population of Assam is heterogeneous with socio-cultural and ethnic diversity, which stands at 312.06 Lakh. This is 2.6 percent of population in India (Census, 2011). The State's geographical area is 78,438 sq. km or 2.4 percent of country's area of which 98.4 percent is rural and 86 percent live in rural areas. Assam is potentially one of the richest geographical units of the country where the mighty river Brahmaputra slashes a central path between its north and south.

Population dynamics of Assam has two basic components, dynamics through natural processes and dynamics through induced processes. Individual State focussed researches testify the above statement (Panda, 1988, Rai and Goel, 1984). As regards to natural growth rate of population during the period 1971 - 81, all the states in the NER registered higher growth rate than the rate for the whole country (Butola, undated P.32). The same trend continued during the period 1981-91. The increasing population pressure gave rise to linkages between quality of life, population dynamics and environmental degradation. During this period, average annual exponential growth rate was 2.12 percent against the national rate of only 2.11 percent. It is believed that the influx of people from neighbouring countries has a bearing in it which has contributed to alter the demographic characteristics of Assam.

### **Data analysis:**

There are 7083 registered artisans in Khadi production. A Federation of KI was established in 1981 to serve common needs. The following KI are functioning in Assam.



Sr. No	Name of Khadi Institutions / Year of establishment	Artisans
1.	Assam Khadi & Village Industries Board, Guwahati / 1955	1196
2.	Barkhetri Unnayan Samity, Mukulmua, Nalbari /1975	784
3.	Dakshin Kamrup Samagra Bikash Parishad, Bijaynagar, Kamrup/ 1978	753
4.	Gram Swaraj Parishad, Rangia, Kamrup/ 1975	630
5.	Gram Lok Seva Sangh, Dhamdhama, Nalbari /1976	877
6.	Pragatisil Khadi Samity, Kalitakuchi, Kamrup /1990	330
7.	Mouman Seva Ashram, Boko, Kamrup / 1944	210
8.	Balijana Anchalik Jana Seva Samity Agia, Goalpara /1976	156
9.	Katigora Gram Unnayan Parishad, Behara, Cachar/1979	157
10.	Barkhola Gramodyog Society, Borkhola, Cachar/1990	40
11.	Sarbhu Gram Seva Sangh, Machkhowa, Dhemaji/1996	80
12.	Tamulpur Anchalik Gramdan Sangh, Kumarikata, Baksa /1962	282
13.	Anchalik Gram Unnayan Parishad, Jania, Barpeta /1986	70
14.	Beeneez A Social Development Society, Sibsagar / 2008	130
15.	Janakalyan Samagra Bikash Parishad, Borihat, Kamrup /1988	209
16.	Bogidol Khadi & V.I. Development Society, Sibsagar/1981	145
17.	Kasturba Seva Mandir, Tezpur, Sonitpur/1963	57
18.	East India Rural Development Association, Nalbari/ 1984	83
19.	Fulguri Ansolik Khadi Gram Udyog Trust, Fulguri/New	166
18	Brindabani Gramin Bikash Trust, Satpakahli, Kamrup/ New	33
19.	Human Resource & Development Society, Rupahihat, Nagaon / New	622
20.	Horizon Welfare Society, Guwahati/New	73
	Total	<b>7083</b>

Out of above around 600 artisans reportedly have shifted to other menial works. These KI receive Government funds. To enable them to receive funds and to ensure the Khadi they produce are genuine the KI are guided by the KVIC's Regulations like Khadi Certification and Khadi Mark Certification. This checks sale of spurious Khadi. The Government supports artisans through Market Development Assistance (MDA) to keep price under control. From 2017 - 18 Direct Benefit Transfer (DBT) scheme has been introduced to regulate MDA. However, the DBT regime is not affable to the artisans. They complain DBT is not handy for the rural and illiterate women for its stringent norm, complex it of online banking. There were no social security schemes for the Khadi artisans. In Oct., 2017 KVIC introduced Group Insurance Scheme called "Aam Admi Bima Yojana" for the artisans. This provides insurance coverage against natural deaths up to ₹30, 000 and ₹75, 000 on accidental deaths and disablements. During 2019-20, total 4444 artisans got covered.

Out of 4744 KI in India Assam has only 19 (0.4 percent) of which only a few are performers. Most of these KI were founded in sixties at the pioneering initiatives of few committed persons inspired by the Gandhian ideology. These institutions have silently contributed to the cause of rural reconstruction over the decades. But with change of time and change of outlook importance these grass root organisations have been underestimated.

**Field visits and interactions with artisans:**

**Barkhetri Unnayan Samity:**

Visited on 23-09-2018. It was founded with aim to rehabilitate the villagers after the river Brahmaputra washed away around twenty villages. Founder Secretary Umesh Medhi and President Sisher Paul Medhi initiated the rural reconstruction works. Their efforts carried forward the legacy. Today it has artisan base of 710, almost all women. Four artisans Renu Baishya, Golap Jan Bibi, Sahane Bibi and Monirisha Bibi of this KI received national awards in year 2007, 2013 and 2016.

**Interactions with artisans of Mukulmua area on 23-9-2018:**

Village Narua - I- The village has around 1000 families. Borkhetri Unnayan Samity has artisan base of 250 in this village, weavers 51 and spinners 199. The improved looms available only in a few weavers' families were distributed in 2007- 08, designed by IIT, Guwahati requires immediate replacements. The spinners mostly use traditional spinning using *Takli*, dropping spindle which fetches marginal income. The village has a high school, LP and ME schools, a Health Centre found not functioning. The MLA is Narayan Deka.

Parul Das (40) is a weaver works on loom 4 to 5 hours a day earning 3000 a month. Tillotoma Das (42) is a weaver works on loom 5 to 6 hours a day earning 4000 a month. Jamuna Das (46) is a weaver earning around

3000 a month. Khiroda Das (40), a weaver, works on loom 7 to 8 hours a day earning 4000 a month. Her husband is a Mason who earns 7000 a month, their 2 daughters got married, the eldest son studied BA and other one is a class - X drop out. These artisans were supported by KVIC, providing work-sheds, each worth 25000 grants, 8 years back. Monumati Das (35) is a *Takli* spinner earning 1,000 a month. Her husband is a day labourer having three daughters and a son, the eldest one reads in class - IX.

### **Village Mukulmua:**

Gita Das (40) is a weaver, works on loom 5 to 6 hours a day earning 4000 a month. Her husband works in Home Guard Department, her daughter reads in class - X and son in class - VIII. KVIC gave her a work-shed, worth 25000 around 8 years back. Komola Das (53) is a widow, a spinner earning 800 a month. She is mother of three sons and one daughter, the eldest son is a Mason and the daughter is a cow herder. Radhika Das (40) is a spinner earns 700 a month. She was sad for not receiving assistance under the work-shed Scheme. She lamented for not possessing a loom, else also could have enhanced her income.

Village Tegheriattaryhas 300 families including 50 Spinners who still cling to Khadi productions but said in common that many families in the village are quietly deserting their age-old spinning as it fetches only marginal remuneration. They said those who opted for other livelihood have attained better economic conditions. Minoti Deka (30), a spinner tries her hand on an old ramshackle set of spinning wheel designed by the Central Silk Board. Her husband is a farmer, son reading in class - III and daughter of three years old. She earn 900 a month. KVIC gave her work- shed worth 45000 grants four years back. Mina Deka (50), a spinner tries her hand on an old set of spinning wheel designed by the Central Silk Board. Her husband is a driver. She has three sons one works in private shop and one is car mechanic. She earns 800 a month. KVIC gave her a work-shed worth 45000 five years back.

Met NiruKalita (44), a spinner for three generations they struggled due to soil erosion of River Brahmaputra. After 14 times moving around for lasting settlements, presently settled they at village Tapabori, Nalbaridistrict-built work shed with KVIC's assistance.

### **Mouman Seva Ashram, Boko, Kamrup (Rural):**

This KI was founded by Subhas Chandra Das (died in 1983). His wife PraffulaBala Das (died in 2020) carried forward the activities. Paran Jyoti Das, BSc, now carries forward the institution's mandate. The institution possesses 150 bigha land after donating 50 bigha to Vinoba's Bhudan programme. There are 210 artisans, all women, from nine villages like Chamaria, Bhalukata,

Monmar, Jarapara, Chatabari, Choygaon, Kurhala, Paneri and Virpara. The artisans mostly belong to SC. Spinners earn 600 and weavers 1200 a month in an average by working 3 to 4 hours a day.

### **Dakshin KamrupSamagra Bikash Parishad, Bijaynagar, Kamrup:**

Visited on 18-08-2018. It operates in two villages Borihat and Sikarhati. Artisans work on Eri Muga and spinners work on *Takli*. There are families who earn as high as 4000. Khushalaya Das (55) of village Sarpara, Vijoynagar, said her earning a month is just 200 who produce yarn from the wastages of Muga cocoon. It is disheartening to see the condition of their looms. The looms are made of battle-nut trunk as they cannot afford to buy a wooden onewhich costs around 18000. The conditions of loom are so decrepit and weaving on these looms is miserable theysaid. We found conditions of looms of most of the weavers are same. Also, the spinning wheels and other toolkits narrates the plight of the artisans.

### **Fulguri Ansolic Khadi Gram Udyog Trust, Fulguri Sikarhati, Kamrup:**

A young girl (20), class - XII pass, Padma Thakuria initiated this KI in 2017. Kundan Rajak is the President. It started with an artisan base of 49 weavers and 196 spinners.

**Tamulpur Anchalik Gramdan Sangh (TAGS), Kumarikata, Baska** was inaugurated by Jaiprakash Narayan in 1964. Founder was Rabindra Nath Upadhyay. TAGS is the biggest KI in NER. KVIC granted a training centre to TAGS on Khadi weaving. There were 300 Gramdan villages and trainings were imparted to women of these villages.

### **Kawli Area:**

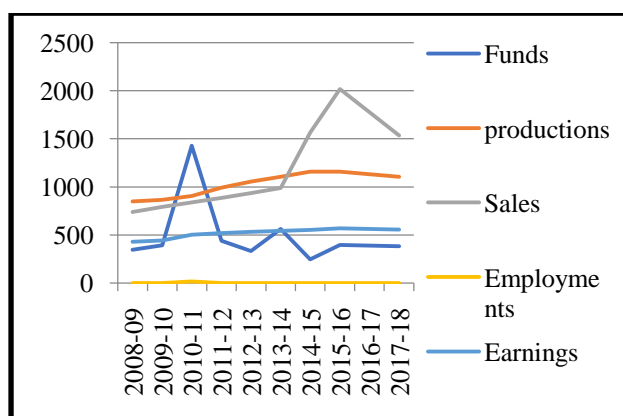
The village Paschim Chandra Nagar received the fury of Bodo movement, 1989. The Khadi Production Centre got damaged. TheKI received fund from BFW, OXFAM in 1980. There were at least four units were working which are being abandoned for long. We interactedwith artisansto understand the plight of their suffering and joblessness. Theyare Rita Mandal Sarkar (50), Renuka Das (57), NirolaBagchi, Astina Sil, Sadhana Chakraborty, Kokila Biswas (30), Mukuti Mitra, Buran Chakraborty, Shanti Bala Das, Minati Sarkar, Kalpana Sarkar, ArunaBala, Maya Rani Das, Sumitra Das, Sweata Mandal, Sakuntala Mandal, PramitaHazdaSaha. They are artisans who need to be given back their job *(all rupees are in Indian currency, ₹)*

The status of funding vis-à-vis output of KI of Assam including AKVIB for last ten years are given in Table 1 as follows:-

Table -1

Year	No of KI	Funds	Productions	Sales	Employments	Earnings
2008-09	19	346.64	849.41	740.09	0.15	429.05
2009-10	19	393.64	866.74	793.68	0.17	441.31
2010-11	36	1429.30	907.55	838.51	0.17	504.50
2011-12	37	441.17	992.83	886.31	0.18	519.48
2012-13	39	334.19	1055.08	935.51	0.19	532.42
2013-14	31	563.98	1105.90	988.09	0.19	544.45
2014-15	32	248.42	1159.77	1563.00	0.19	555.48
2015-16	32	399.14	1159.77	2016.43	0.19	571.15
2016-17	32	391.77	1132.89	1775.72	0.19	564.08
2017-18	34	384.40	1106.00	1535.00	0.49	557.00

Source: Annual Reports, KVIC, Ministry of MSME, GOI for 2008-09 to 2015-16 & 2017-18



**Fig.1** Status of Khadi for last decade

The above graph explains the status of Khadi for last decade. There has been stagnancy in earnings, employments and productions. Barring year 2010-11, funds received from KVIC has not shown progressive increase.

**Findings and Recommendations:**

Khadi has its deep-rooted connection in Assam. which is an inherent strength. Khadi artisans, mostly women work with decrepit tools and equipment, their wage level is low. So they can't have the better looms etc. of their own. The role of KI in supplementing rural economy, in preserving culture and creating livelihood to the vulnerable at their own place, in a eco-friendly way deserve appreciations. There are KI that were founded before independence and over the decades silently contributed meaningfully, but for lack of adequate supports they are fast becoming sick.

The industry has been finding it hard to absorb the jerk of DBT regime. They were not given time to prepare

them. We captured the words heard from their mouths. A separate set of rules at the sideline of DBT regime need to be put in place for them at least for five years as neither there is required banking network nor these artisans are made abreast with online banking operation. It appears the production vis-à-vis wages those artisans earn are poor still these women for decades working. Their earnings need to be enhanced by providing improved tools, creating working ambience like workshed, electricity, water, sanitation, hygiene, road, connectivity etc. The demands of their products are high. In our consistent investigations never, we heard about dearth of market. Khadi, the hand-spun and hand-woven natural fabric, can outlive commercially with supportive pro-rural development policies.

We have encountered, taking the advantage of very nominal institutional supports to the artisans, middlemen, who do not adhere to ethical business standard, has already made entries to these areas, luring the poor artisans offering wages in advances, supplying sometimes spurious raw materials, are succeeding to weave a net of exploitations in form of a debt trap. In fact, public fund investment to promote Khadi has remained very scarce and complex to avail. This is not a threat to rural economy alone but to the rich culture and heritage of Assam.

**Conclusions:**

Khadi has its intimate inheritance in Assam. It has the strength to become a meaningful economic activity for the rural people, especially women, who else, would remain unemployed. The number of registered artisans is just 7083 for many years. This explains there has been something wrong in support system especially when compared with number of artisans in handloom sector. When the demand Khadi textiles has been increasing consistently, there is urgent need to

comprehend how these amazing artisans can be supported the way they deserve. The State Government need to display wisdom by augmenting the efforts of Central Government. The concern is to bring their wages to a significant level. The existing monitoring mechanism is weak, does not help to generate realistic picture of employment, production, number of

functioning unit and utilization of government assistance. The existing KI should be strengthened and more should be created. Their needs to be felt. This remains a challenge. Working among the poor in rural setups altogether a different experiencean opportunity to read the faces to reach deep into their hearts.

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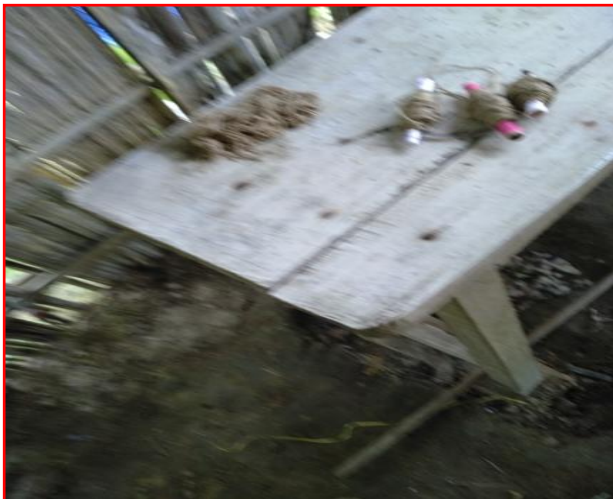
**Photographs:**



Khadi production at Kawli Area deserted after 1989, Photo on 12-07-2018



Gramdan Sangha, UNICEF project once Khadi production unit need revival Photo 28-10-2018



Khadi Spinning implements reflecting the poor state affairs Photo on 10-07-2018



Poor artisan managed to make her loom from battle nut trunk as a wooden one can't afford Photo 10-07-2018



Khadi weaving loom of poor artisan need immediate replacement Photo on 10-07-2018



Khadi unit at Kawli Area can be revived with Govt. support, deserted after 1989, Photo on 12-07-2018



## Prospective Khadi Industry in Assam Faces Adversity – A Study



A traditional artisan in Khadi spinning on improved loom, Rangia, Assam Photo on 04-08-2018



KVIC introduced improved tools and equipment needs to put in optimum use, Photo on 07-09-2018



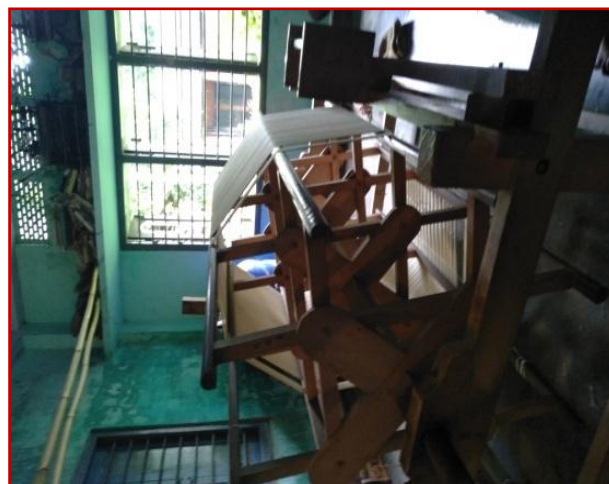
Inside weaver's house with paddy husking equipment & spinning wheel depleted economic condition 10-07-2018



KVIC established Yarn Testing laboratory at the premises of TAGS, Kumarikata Photo on 12-07-2018



The long used traditional decrepit spinning wheel & other implements needs replacement, Photo 10-7-2018



Improved warping drum for Khadi Weaving in Khadi Institution at Rangia, Assam, Photo on 04-08-2018





With artisans of minority community at Pragatisil Khadi Samity, Kalitakuchi, Kamrup on 12-08-2018



Signboard of FulguriAnsolic Khadi Gram Udyog Trust, Fulguri founded by a 20 years old girl



Khadi Mark Certificate to TAGS in 2015, KVIC steps towards building brand image Photo on 12-07-2018



NiruKalita, artisan victim of repeated soil erosions, KVIC provided work-shed photo 12-11-2020



Improved New Model Charka provide by KVIC to Khadi Institution need optimum use Photo 07-09-2018





# INDUSTRIAL ENERGY EFFICIENCY - BARRIERS AND FUTURE PROSPECTS

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**Abstract**

Research has recognized an extensive potential for energy efficiency improvement within the industrial sector, which is accountable for a significant share of global energy consumption and subsequent greenhouse gas emission. This study discussed the major barrier found in the literature in different industrial environment and it has been observed that the classification of the barricades to energy efficiency are diverse for different firms or establishments. Some barricades are very substantial in majority of the industrial establishments (financial/capital related, informational) while position of further barricades differs considerably across sectors. No single policy could be able to cater the diversified industrial segments. As an alternative, a variety of approaches is likely to be required, which will be helpful for the addressing the barriers of individual circumstances.

**Keywords – Barrier, Energy Efficiency, Investment, Industry**

**Introduction:**

The worldwide oil calamity in 1970s and subsequent environmental issues put forward the energy conservation programme as a main concern globally. Hereafter, human impact on the environment needs an instant attention and energy conservation practices put forward a time and cost-effective answer to lower air pollution and CO<sub>2</sub> (International Energy Agency, 2016). Residential energy consumption contributes to the approximately 30 % of the global energy consumption and the same will be increased with the urbanization growth, population and change in life style. According to global studies, dwellers in developing countries are now living in a comfortable lifestyle, by utilizing new electrical domestic device such as room heaters, refrigerators and air-conditioners, which is also a key driver in increase in energy consumption in residential sector (Norzalina et al., 2014). Energy sector is major contributor for the greenhouse gas emission and contribute almost three-quarter of the emission and with major share of industrial usage (Ritchie, 2020). The energy consumption pattern of industrial section consists of different type of industries which includes manufacturing, assembling, agriculture, mining, and construction (Abdelaziz et al., 2011). Industrial energy efficiency has the potential to increase the commercial competitiveness and subsequently helps in the reduction in the energy consumption and respective carbon

emission. Therefore, improved energy efficiency subsequently improved energy supply security, which ensure a sustainable development for the betterment of the society. Improvement in the energy efficiency by end users are considered as a pertinent measure to decrease the energy related emission of carbon dioxide and an economical way to improve the energy security (IEA, 2011).

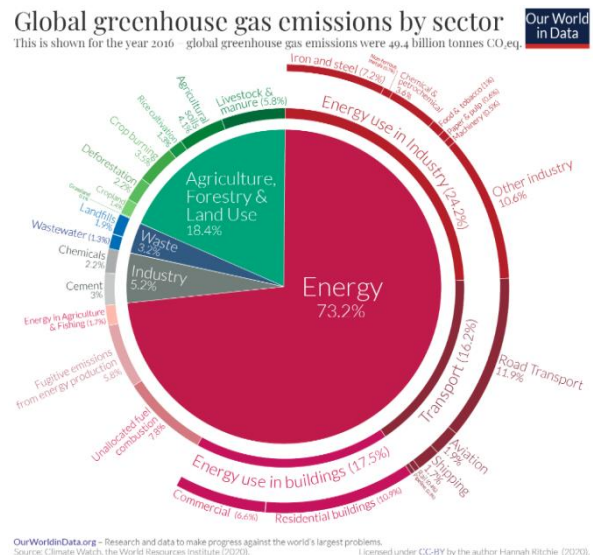


Fig.1 – Global greenhouse gas emission by sector

Majority of the industrial establishments faces financial gravities due to the continual increment in the cost of energy. In European countries, major emphasis is given on the energy efficient improvement projects and which are considered as the finest method to complete the significant targets set by the European Commission wrt Green House Gases emission and decrease in energy consumption. Despite of the financial reimbursement by lesser payback period of the investment and subsequent reduction in operating costs through reduction in specific energy consumptions many organizations operate in an ineffective way.

Organization’s choice to defer or discard the implementation of various energy efficient measures, despite these measures are commercially beneficial and simple in execution, is considered a paradox. The main model utilizes to describe the difference among the optimal and existing level of energy efficiency is the barrier model. (Sorrell 2004, Trianni and Cagno, 2012).

Around the globe only 33 % of the final energy use comes under Today only around one-third of final energy use is covered by obligatory energy efficiency policies which includes various codes and standards by different governments. The growth of these codes and standards to include the all-energy use is also weak.

**Objective**

The major objective of the paper is to study various barriers of energy efficiency in industrial environment. It also examines atmosphere in which they arise, their importance, and the requisite explanations to overcome these barriers. To tracedifferent studies, following scholarly databases was searched: ScienceDirect, Web of Science, and Scopus utilizing the mentioned search threads: ‘Energy efficiency’, barriers of energy efficiency, energy conservation, efficiency improvement in industry.This topic published in Energy Policy, Energy Economics, Journal of Cleaner Production, Energies and Energy Policy.

**Key Definition**

A **barrier** for energy efficiency is defined by Sorrell et al.(2004). is “a postulated mechanism that inhibits investment in technologies that are both energy efficient and economically efficient.

**Energy Intensity** is defined as the energy consumed per unit in the context of industrial energy practices and which is inversely proportional to energy efficiency; lesser the energy requirement for any unit production process, the higher is the energy efficiency (Soni et al., 2017).

**Energy efficiency** is defined by the United States Energy Information Administration (EIA) “to use technology that requires less energy to perform the same function”.

**Energy efficiency gap**denotes to the difference between the energy efficiency levels observed and those considered as optimal according to engineering fundamentals or it is the mismatch between the theoretically achievable level of efficiency and the implemented one is basically known as energy efficiency gap (Jaffe andStavins1994).

**Energy-efficiency improvements** are not only limited to "retrofitting", i.e., refining the efficiency of existing equipment or machinery and processes but also includes the importance of any type of energy efficiency initiatives in new manufacturing setup and equipment or machine and implementation of latest technology.

**Small and medium enterprises** are defined by different countries based on the capital investment on plant and machinery, annual turnover and number of employees.

**Barriers**

In literature barriers has been classified by different various types: social and institutional barriers, Technical, Financial, Managerial, Information provision, Internal and External barriers etc. Barrier can also be varied according to energy efficiency measures, such as comfort in implementation, modification in process requirement as per customer demand, precise technical requirements, production interruption, etc (Cagno and Trianni, 2014).Sorrell et al.(2000) has categorised barriers into economic (market failure and non-market failure), Behavioural and Organizational barriers which has been corroborated by the many other authors (Thollander and Ottosson, 2007; Rohdin and Thollander, 2006;Palm, 2009).Main barrier summary found in the literature is mentioned in the Table -1.

**Table-1**  
Main barrier summary to industrial energy efficiency

Sr. No	Industrial Sector		Country	Reference	Main Barrier
	Single	Multiple			
1		Residential, industrial and commercial sectors	India	Reddy and Shrestha, 1998	Lack of awareness, high capital investment and uncertainty of savings
2		Multiple	Australia	Harris et al., 2000	Small rates of return and longer payback periods
3		Multiple	UK	Sorrell S et al., 2000	Shortage of time, different priorities for capital investments, and inappropriate technology
4	Foundry		India	Nagesha and Balachandra , 2006	Economic, awareness and information barrier, Financial and behavioural barrier

5	Foundry		Sweden	Rohdin et al., 2007	Capital issue, technical risks, lack of budget funding
6		Textiles, Metals, Food, Chemicals, Paper,	Greece	Sardianou 2008	Bureaucratic procedures for financial support, restricted capital access
7		Industrial sectors	Switzerland	Cooremans 2012	Low concentration in energy-efficiency involvements, other priorities for capital investments
8		SMEs	China	Kostka et al., 2013	High preliminary capital expenditure, absence of economic incentives
9		Iron and Steel, Plastics and Chemicals, Food	Ghana	Wentemipaning and Thollander 2013	Issue of funding, access to capital, diversion of capital for other priorities
10	Metal manufacturing		Italy	Cagno and Trianni, 2014	Implementation issues, barriers vary significantly with intervention considered
11		SMEs	Pakistan	Hassan and Asif 2017	Capital, problem of production disruption, poor equipment performance, lack of public policy, scarcity of requisite technical staff
12		SMEs	Italy	Trianni et al., 2015	economics issues, informational and behavioural barriers
13	Aero-space		UK	Lunt et al., 2014	Accountability issue, risk, issue of capital, Bounded rationality, Fear of product quality, Fear of impacting health & safety
14		Commercial and Service sector	Germany	Schleich 2009	Requisite information, hidden costs, risk and uncertainty
15	Foundry		Europe	Trianni et al., 2017	Hidden costs, Access to investment, Adverse selection, bounded rationality, accountability of energy costs
16	Process industry		UK	Walsh and Thornley 2012	Stakeholder engagement and strategic mapping and the need for capital support for infrastructure
17	Steel Industry		Indonesia	Soepardi et al 2018	Financing, Institutional, Information, Economic, Market structure, Technical, Expertise, Regulation
18	Manufacturing		Singapore	Chai and Yeo, 2012	Technical risk, perceived high cost, Lack of Information, lack of govt incentive
19		Small Scale Industry - SSE with Forging, Railway, auto and tractor parts	India	Anil et al., 2017	Policy and Regulatory Barrier, Personal & Informational Barrier,
20	SMEs		Zimbabwe	Muzamwe T.C (2016)	policy framework issue, old equipment, insufficient funding mechanisms, limited information, economic incentives issues, technical capability problem

Many different studies have shown experimental evidence for the presence of barricades for the energy efficiency. The nature of these barriers is heterogeneous. Different types of barriers are experienced differently among different technology adopters and vary between technologies. Subsequently, several diverse methods to interpret and classification of barriers appeared in the literature (Fleiter et al., 2011).

Blumstein et al. (1980) defined and classified several types of social and institutional barriers pertaining to economical energy conservation activities. The type of identified barriers are: (i) Misplaced Incentives, (ii) Financing, (iii) Regulation, (iv) Market Structure, (v) Lack of Information, (vi) Custom.



Fig. 1 – Word Cloud of Major Barriers

Another classification of barriers was given by the Intergovernmental Panel for Climate Change as follows: (a) Innovation in technology, (b) Financing, (c) Prices, (d) Market Structure and Functioning, (e) Trade and Environment, (f) Information Provision, (g) Institutional Frameworks and (h) Behavioural Norms.

The study of Almeida et al. delivers an information on energy-efficient motor technologies, which classify the barricades as - (a) Awareness (b) different technical choices, (c) Financial, (d) Internal struggles, and (e) structure of market

Muzamwese (2016) has found the various issues for mainstream energy efficiency improvement projects in SMEs in Zimbabwe and major barricades included were in relation to finance and technical issues, policy awareness and different problems in the firms. In addition to the challenges numerous actions were also discussed to surpass the major barriers. Trianni et al. (2016) interviewed more than 200 different manufacturing SMEs in north part of Italy which concluded that beside the economics issues, informational and behavioural barriers emerge as critical issues.

Viesi et al. (2016) has found that requisite assurance from higher management is also a key barrier in SMEs leading to a little urgency of energy efficiency improvement measures, consideration of the same should be taken into account during policy design. Top management functional role and operational managers involvement also plays a significant role in implementation of the energy efficiency improvement projects. The involvement of top operational managers in execution of any type of energy efficiency enhancement projects increase the likelihood of adaption from 31 % to 44% (Blass et al., 2014).

Harris et al. (2000) has found that the investment in energy efficiency improvement projects in Australian organizations is a complex issue. The investment decision depends upon a large number of factors and the major barrier for this type of investments is the expenses and involvement of various risks in attaining information and investment in new technologies.

A study of residential, commercial and industrial sectors in India found that the key barrier to energy efficiency improvement were (i) lower awareness; (ii) capital expenditure; (iii) availability constraints; (iv) undefined monetary benefits or savings; and (v) unconcerned consumers. As a measure for the removal of major barrier government should try to disseminate the monetary benefits related information to the consumers and easy understanding of the trade-off between the investment cost of the energy efficient device and the forthcoming energy savings (Reddy and Shrestha, 1998).

Many studies have found various barricades related to implementation of energy efficiency improvement in engineering and manufacturing sector. Still, there is no agreement about the most important barriers. Different authors have defined different barriers as critical barricades for the energy efficiency improvement initiative. While some of the authors such as Nagesha and Balachandra (2006) and Rohdin et al. (2007) determined that economic barricades are the utmost substantial barriers, others have recognized production related risk and information barriers as the key important barriers (Kounetas et al., 2010; Rohdin and Thollander, 2006). A study of the US based cement manufacturing organization found that involvement of large capital investments act as a hindrance in energy efficiency improvement measures (Coito and Allen, 2007).

Subsequently, there is uncertainty, whether overcoming the most critical barricades will automatically lead to improved energy efficiency implementation, specifically in case of inter-relation of barriers. Worldwide, A number of policies have been deployed for the promotion of the energy efficiency in different sectors but there is no conventional methodology or theory on when and which policy should be applied to get the full utilization of the promotion activities (Chai et al., 2012).



## Conclusion

To endorse energy-efficiency developments, actions are expected at one or more levels -- from the lowest level of the consumer (commercial, industrial and residential) to the highest level of worldwide agencies. However, barricades to the execution of energy-efficiency enhancements projects exist or can arise at all these levels.

In literature several barricades to the implementation of energy efficiency technologies have been recognized and different techniques and policy instruments have been presented to provide a solution for these barriers such as mitigation of risk can be addressed by different essential grants and loan facilities, rebate or subsidies, tax deduction, tax credits etc. Similarly, information problem can be resolved through different type of energy audits, product labelling under standard and labelling scheme, energy performance certificates of different appliance, building codes, grants and loan facilities and guarantees (Cattaneo, 2019)

The number of times imperfect information appeared in the literature advocates that firms would have additionally participate in energy efficiency improvement projects if these firms were well conversant with the prospects aligned and subsequent reimbursements or payback. Corollary to which, dissemination of energy efficiency improvement programmes is considered as a priority to reduce the impact of the barrier. Kostka et al. (2013) suggested that the informational barriers are the major blockage rather than financial and organisational barriers.

Some authors have proposed the system thinking approach for the barriers by using (MCIR framework) four stages, motivation, capability, implementation and result as well as feedback loop. The system solution is proposed with the consideration of relationship between the barriers, which permits the valuation and identification of the feeble link in energy efficiency policies (Chai and Yeo, 2012).

We have seen that the classification of the barricades to energy efficiency are diverse for different firms or establishments. Some barricades are very substantial in majority of the industrial establishments (financial/capital related, informational) while position of further barricades differs considerably across sectors. Therefore, practical policy solutions need to address the specific environments of energy-using sectors and organisations. So those targeted barriers can be overcome by the utilization of the adopted policy measures. However, it is highly unlikely that there will be a possibility of single best policy solution for all of the barricades. As an alternative, a variety of approaches is likely to be required, which will be helpful for the addressing the barriers of individual circumstances.

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# **SOCIAL MEDIA OVERDOSE: HOW MUCH IS TOO MUCH?**

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The social media stories are not only stunning but shocking as well as we keep on hearing them from different sources. A 19-year-old teenage boy attempted suicide because he was not able to get the “perfect” selfie. He was spending 10 hours every day to take 200 selfies each day from his iPhone. He got disconnected from all his friends, family and even his education. He was totally engrossed in posting his best pics as well as on commenting on social media.

A young woman started using Facebook and was immediately hooked onto it spending long hours on the site. This habit irked the parents who scolded her and tried keeping her away from social media. The woman got so heartbroken that she hung herself from a ceiling fan.

A young woman who was visiting Australia took this distraction to a whole new level. Unaware of the things around her she walked off the St. Kilda pier and fell into the chilly waters of Port Phillip because she was too engrossed looking in Facebook on her phone.

All the above incidents have one thing in common, Social Media Addiction. This is all that we have been reading lately and it certainly is a matter of concern to ask ourselves “How much is too much on social media”?

Social media in its nascent stages was a harmless platform for having fun. However, now it has not only become a part of our life but is ruling our lives too. With all of us living in the world called the “new normal” interactions are happening virtually and human connections have taken a back seat. The virtual world has become our actual world and social media usage has gone up rapidly wherein every individual, irrespective of their age has got addicted to picking up their phones and checking their notifications at regular intervals. On one hand, we are enveloped with the feeling of loneliness and uncertainty and on the other hand social media has triggered us to overthink, compare, react and feel insecure.

Over the past few years, the number of cases related to depression, anxiety and stress have grown in magnitude because of social media addiction. Social Media displays a false reality where everyone shows-off their happy side of life. This increases the despair of not able to cope up

with the supposedly desirable lifestyle. Social Media encourages narcissism where getting a ‘like’ on a post becomes the biggest reward. Social Media has the ability to make one a close-minded person too. We generally see what we wish to see and ignore the rest. This gives cues to the system algorithm to present us more of that content which we wish to see. Social Media puts us into a potential risk of sharing our confidential information including address, sexual orientation, political views, and financial details which can potentially put us into grave danger. Finally, Social Media uses-up our precious time away from creativity, knowledge, exploration and socializing with real people.

Do you reach out for your phone first thing in the morning to check your social media notifications? Do you check your notifications in the middle of the night? Do you constantly have an urge to check your social media multiple times during the day? When on a vacation, are you focused on taking the best selfie to upload on Instagram or Facebook rather than enjoying your time? After posting on social media, do you keep checking for the number of likes or comments to see your popularity?

Well, if the answer to all the above questions is a “yes”, then it’s time for you to take a social media detox!

How to do Social Media Detox?

## **1. Recognition and Determination:**

It is important to recognize and accept that you have a problem with Social Media addiction. The next stage is to be determined to continue the detox exercises for the necessary time. One good way is to inform your family and friends that you will be out of social media for some time. This way, your family and friends can remind you or reprimand you if you deviate from your plan.

## **2. Resolution:**

Depending on your level of addiction, you can take various resolutions towards Social Media detox. One way is to remove all your Social Media applications from your Smart phone or from your browser. The other way can

## ***Social Media Overdose: How Much is too much?***

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be to stay away from any Social Media platforms for a considerable time.

### **3. Replacement:**

It is crucial to replace the void created by removing Social Media from your daily routine. The void can be filled-up by exercising, reading, writing, travel or any other creative work or hobbies.

You can detach yourself from social media for 30 days and see the difference in you. To start with, you should try doing it for 7 days and create a whole new “real world” for yourself and see the difference in you to find the answer, how much is Too much!!

# **AN INDUSTRY 4.0 PERSPECTIVE ON DEFECTS, QUALITY AND DATA SCIENCE**

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Product recalls often make it to the headlines. A mobile phone that catches fire, an automobile whose braking system malfunctions at high speed, and processed food that contains a hazardous substance beyond the allowable limit are some such events we witnessed in the recent past. Manufacturers suffer massive financial and reputation costs if they have to repair or replace products used by the customers. Product recalls adversely affect all stakeholders. So, why do they happen? In most cases, it is due to a defect or more that went undetected. Such eventualities happen even for the businesses that swear by the quality of their products and processes.

In a competitive market, a manufacturer cannot compromise with either quality or volume. Therefore, every product goes through quality checks before its release to the market. A product is considered of high quality when consumers do not find any defects in them. Interestingly, the testing process aims to ensure that by trying to achieve the opposite. A successful test detects all latent defects. The process, therefore, maximizes the probability of defect detection.

The growth in volume poses a significant challenge. Even when it is not destructive, testing is a time-consuming process. It quickly adds to the overall manufacturing cost when volumes are large. Manufacturers need solutions that can reduce costs and increase the effectiveness of testing. Data science can help. Along with the transition from industry 3.0 to 4.0, the availability of real-time data has increased manifold. In the process of manufacturing, data is captured on a large number of attributes of the products. These data are analyzed using predictive and deep learning algorithms. One of the purposes of this use of analytics is to predict the defect early and minimize the necessity of more elaborate costly testing.

Products in the hands of a customer must be defect-free. At the same time, exhaustive testing of every product can be prohibitive. Precision sensors and the use of data science can find an optimal tradeoff between the two. The success of such solutions would depend on the technology and algorithms and how defects once identified are managed. It is crucial to establish and execute a learning loop.



# IS DIGITALISATION THE FUTURE OF EVERYTHING?

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Digitalization refers to the transformation of communications and business services into digital models, which frequently entails omnichannel (digital and physical) customer service, smart manufacturing or integrated marketing including a combination of manual and automation process. Digitation is basically converting and/or expressing non-digital data (such as products, ID cards, health records, location data) into a digital format that may subsequently be used by a computing system for a variety of purposes such as sales, record maintenance, data analytics, etc.

Digital transformation is an exponential change. From automations of cars like Tesla, wearable health trackers such as smart watch or Fitbit watches, chatbots used in websites and apps to cryptocurrency digitalization is playing an important role in transforming and innovating all sectors. The digital transformation is changing the traditional way of doing business. With the fast-changing time, different industries are drifting towards digitation of their physical products or services as the new way to work is by embracing technology. Digitalization is making every disconnected thing wired and interactive through technological involvement and advancement. Digitalization is giving opportunity to all industries to make their presence reach a larger audience, meeting client expectations, having a satisfactory work force, management of the operational costings, customer-relationship management and lot more.

With the large boom of product and services, information technologies and virtual gears are gaining popularities to make the business more effective and efficient at lesser costs. From beginning a weblog to growing social media channels to updates and promotions to clients through email, many channels may be applied to attain your clients and communicate with customers. The major digital technologies such as social media, data analytics, data mining, artificial intelligence, internet of things, big data are providing ample of opportunities to all businesses to gain competitive advantages, build customer relationship, build brand awareness, improve customer satisfaction and understand the consumer needs for better marketing communication and strategic decision making.



To stay in the market, the companies are adopting different strategies and tactics through the social media, new digital PR channels and innovations, which has changed the marketing methods and innovated the services and products with their virtual presence.

It is now much easier to expand the scale of production without major investment in manufacturing and e-commerce is also playing a vital role in new ways of increasing the shopping and marketing for buyers and sellers. The producers may reach a whole new client base through ecommerce, regardless of where ever you are in the world.

It is useful to understand how your business compares to competitors in terms of internet traffic mix and for that, you may use analytics tools like Google Analytics to figure out where your consumers come from and also compare your firm to others in the same industry and size.

The digitalization has made a great impact for customers too as you can see other customers review and feedbacks and take your purchase decision in just a click. The growth and impact of digitalization is making it reachable to consumers, helping managements in strategizing and also in providing them a competitive edge with cost effectiveness. It has also been observed how influencers and social media marketing is trending and their effects on the decision making through their followers is tremendous, making these influencers as Brands and their recommendation to any specific brand plays a huge impact for brands sponsoring them.

## *Is Digitalisation the Future of Everything?*

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Digital marketing has increased the market value of many clients as their products are online and large number of users on the web 24/7,365 days. Digitalization helps in brands creating user friendly websites, develop e-mail campaigns, increase the traffic of websites with Search Engine Optimization (SEO) and directing potential clients to companies' website. Hosting webinars and social media presence is also suggested for better connectivity with customers and businesses.

Digitalization is important for modern day organizations existence and if you want your enterprise to grow, you have to expose your brand to a bigger audience. Digital advertising can initially be seemed intimidating, but it provides your business a greater opportunity and has a whole lot of capability to assist your business to grow.



# PLANT BASED MEAT: A SUSTAINABLE FUTURE FOR FOOD MARKET

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After years of development, companies like Good Dot, Vegeta Gold, and Veggie Champ have created convincing meat replacements utilising plant components like soybean roots and pea protein. Surprisingly, the majority of people who eat plant-based meats are not vegans or vegetarians. Instead, they're omnivores who enjoy a wide variety of foods. Now a days millennials (aged 25-40 years), are more likely to consume less meat owing to environmental concerns. At the same time, customers become more ecologically conscious and vegan diets gain popularity around the world, the pandemic is accelerating the acceptance of meat-alternative goods. According to a research published by India Bioscience Posted on Oct 12, 2019, per capita yearly meat consumption grew to 4.4 kg per person in 2019, putting strain on supply lines. As a result, there has been an increase in the demand for water and land resources for cattle production.



In India, being a vegetarian during this pandemic is a thrilling experience. Nuts, lentils, and green leafy vegetables are no longer the only non-meaty protein sources that are available. Vegetarians are obviously having a

moment, with grinded peas imitating luscious burger patties, shredded jackfruit imitating pork, chopped mushrooms imitating steak. According to the Good Food Conference 2021, Plant-based meats make for less than 1% of total meat sales in the United States. Although this may appear insignificant, the industry has grown at an exponential rate in recent years, indicating a major change in how we produce and consume food. Americans purchased 157 million pieces of plant-based meat last year, up 23% from the previous year.

Bollywood celebrities Riteish Deshmukh and Genelia D'Souza, who became vegan four years ago, announced the establishment of Imagine Meats, a plant-based meat meals firm, last year, during the height of the pandemic. "We aren't seeking to replace everyone. This is a new market that is both niche and developing. Of sure, there will be a day when everyone is thinking about plant-based foods, and that will be fantastic," says the actors. Genetically modified organisms (GMO)-related health and food safety issues appear to be the main factors for meat substitute purchasers. A rising amount of evidence has connected meat intake to diseases including heart disease, cancer, and diabetes in recent years. It has been discovered that processed meat, in particular, is hazardous to human health. People may reduce their weekly meat intake by integrating plant-based foods into their diet, increasing their overall health in the process. Plant-based meats also have environmental advantages that should not be disregarded. According to the United Nations, the meat sector is the world's greatest producer of greenhouse gas emissions (GHG).

Plant-based foods will be the food of the future because of three main reasons.

1. **Consumer preference:** The vast majority of plant-based meat eaters are not vegans or vegetarians. Instead, they're omnivores who prefer a varied diet.
2. **Health:** A rising amount of evidence has connected red meat intake to issues such as heart disease, cancer, and diabetes in recent years.
3. **Environment:** Meat production also contributes to deforestation, soil degradation, and water pollution, according to the UN.



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# US RECESSION AND ITS IMPACT ON INDIAN ECONOMY

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From December 2007 to June 2009, the United States suffered an extended economic downturn that came to be known as the Great Recession. It was the worst financial crisis in the US since the great depression, leaving an impact on homes and businesses in America and around the world. When an economy escalates over a period of time and reaches the peak, the graph eventually starts to fall down leading to an economic recession which seems common to any economic cycle.

To begin with, the main reason behind the US great recession was the fall in the mortgage market. The failures in financial regulation and excessive borrowing by households contributed to the primary cause of recession which was the subprime mortgage crisis. When someone wants to buy a house, they will often borrow hundreds of thousands of dollars from the bank. In return, the bank gets a piece of paper called a mortgage. Every month the home owner has to pay back a portion of the principle plus interest to whomever holds the piece of paper. If the home owner fails to pay back the money, it's called default.

A subprime mortgage is normally issued to borrowers with low credit ratings. As the housing market were booming in the early 2000's, banks began to offer subprime mortgage. Many people with low credit ratings started to take the subprime mortgage loans because they stood to make a large profit if their house increased in value. In 2007, the actual recession started as the demand for the housing went down, the prices of homes dropped rapidly. People stopped investing in real estate market since it was no longer profitable. Many people were not able to pay their mortgages because at a particular point the value of mortgage was higher than the value of house itself. The bank foreclosed their home. Since the foreclosed houses were now worth less money, financial institutions lost money along with the homeowners resulting in housing market failure and the bank crumbled.

Due to these, the economy descended and the great recession officially began. The economic downturn was devastating. Many people and businesses suffered huge financial losses and therefore they started to spend less money, further damaging the economy. Financial firms were not in a position to lend money. In 2008, the government stepped in and bailed out the bank which led to a great national deficit. The Great Recession not only totally destroyed the economy of the US but also had a

major impact worldwide. The Indian economy was also one of them that suffered economically due to the US financial crisis in 2008.

India's banking sector was not directly integrated with the global financial market in the 2000s and also the markets of mortgage-backed securities were not exposed to the global market. However, India's economy in terms of global trade and capital flow is mostly integrated with the global financial market, which might deviate towards the fact that the Indian economic market was affected by the US economic crisis in 2008. The fall in the capital flows, foreign trade, and low exchange rate flow transmitted a negative impact on the Indian economy.

As per the Reserve Bank of India, the trade flows of the country slowed down before the US recession happened. These initial lowering down of trade flows were seen to be collapsing after the US recession broke down. The trade collapse triggered by the global economic crisis was found to be more serious than the balance of payments crisis. India's export ratio to the United States was hindered due to the economic crisis. Majority of US clients were interested in working in an Indian company as an outsourcer. The Indian company who used to employ US clients faced problems replacing them with the new one.

Despite some negative impacts on the Indian economy due to the US recession, many factors saved India from facing severe consequences. India was hugely dependent on its own agricultural products due to which India did not have to suffer huge losses as it was self-sufficient. India was also not active in the markets of mortgage-backed securities and credits which were the sole reason for the failure of the US economy. Although the Indian Merchandise exports market was highly affected by the US recession but the service exports did not fall. Foreign Direct Investment went high, financiers retrograded flows into India whereas the long-term investors were found continuing with their projects.

The Reserve Bank of India under the direction of the government of India lowered interest rates and expanded credit value. Excise duties were cut by the government of India to match demand. In these crucial times of US recession, many Indian companies brainstormed and came up with some brilliant ideas regarding rural financing, efficiency, human factor, core competencies, strategic planning, etc.

## *US Recession and Its Impact on Indian Economy*

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The rural India consists of 70% of the country's population as per the census of 2001. The huge population has caused the demand for consumption to increase but has very low income. Due to the high demand in consumption the micro financing came into action leading to the market growth in the rural areas. While the urban areas were hindered by the US recession, the rural area prospered in a way.

Recession is an inevitable phenomenon in an economic cycle that cannot be unseen. The economic calamities it brings to a nation are huge. All the companies in the developed and developing nations need to have a contingency plan so as to operate smoothly and bear minimum loss during the recession that might outrage in the future.

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