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Editorial

Changing economic times are having a huge effect on the Indian as well as global economy. Business organizations find themselves in a spot of worry and are in a thinking mode. Additional variables have crept in to influence these organizations. As a repsonse, organizations are trying to find ways to be more productive and profitable. I congratulate researchers and editorial team members to continue to work during the difficult times of pandamic.

The current issue of 'Synergy' Volume 22, No 1 & 2, consists of research papers on various management related topics. This volume of Synergy focuses on some of the latest research carried out by researchers on topics related to management discipline. This issue includes research papers on topics related to functional areas of management, including Tourism management, Dairy Farming, Technology Adoption, Women Entrepreneurship Development, Consumer Awareness, Rural Economy, etc.

The seven blind peer reviewed papers covered topics such as Tourism management, Dairy Farming, Technology Adoption, Women Entrepreneurship Development, Consumer Awareness, Rural Economy, etc.

On behalf of our editorial team, we sincerely thank all the authors and look forward to their continued interest in Synergy and exchange information, viewpoints in the form of research papers on upcoming issues.

We humbly invite your views and suggestions to strengthen our efforts in making further improvements.

(Dr. Yogesh C. Joshil) Director

Foreword

The G. H. Patel Post Graduate Institute of Business Management (MBA Program) is a constitutive department of Sardar Patel University (NAAC Accredited Grade A with 3.25 CGPA) which has been offering a management programme since 1989. It is one of the leading management institutions in the state of Gujarat.

In recognition of the standard of research in the Department, the University Grants Commission, New Delhi, has increased its status for the award of special assistance under DRS - II for "Market Research in Rural Areas" which it successfully completed in March 2016. The Department has also earned SAP DRS III (2016 to 2021) for a five-year period of "Transformation of Rural Economy" study. The Department also received a project on "Awareness, Attitude and Perception of Voters in Gujarat" from the Indian Election Commission. Throughout its journey of providing management education, it has an outstanding record in terms of quality education and training.

The Department has contributed continuously to the research activities. All faculty members are regularly engaged in academic publications. It also organises regular national seminars on a range of topics related to current management research scenarios. All nine faculty members are known as Ph.D. Guides. More than 100 students from India and abroad have successfully completed their Ph.D. degree from the Department and fifty are pursuing their doctoral studies. The department also facilitates one post doctoral fellow.

This research journal offers a forum for daily interaction and exchange of views, viewpoints and research findings between peer groups. I am sure that this issue of "Synergy", Journal of Management, Sardar Patel University, provides for a great deal of information sharing among teachers and research scholars belonging to the discipline.

I congratulate the editors for putting out yet another volume of Synergy and I appreciate the efforts they have made.

Date : 21st December, 2020 Sardar Patel University Vallabh Vidyanagar Dr. Shirish Kulkarni Vice-Chancellor

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Dairy Farming: The Rural Cash Cow

Priyanka Purvang Pradhan* and Dr. P. K. Priyan**

Abstract

Sustainable dairy farming is emerging as a major alternative to the cotton cultivation method in the state of Gujarat, which already produces nearly 14.493 million Tons of milk in the year 2018-19 as per Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmer Welfare, GOI. As per 20th Livestock census, in Gujarat the total number of milk animals in cows and buffaloes (in-milk and dry) is 125.34 million, an increase of 6.0% over the previous census i.e in 2012. Livestock capital is considered humanity's oldest wealth resource and the sector plays a crucial role in rural economy and livelihoods.

This study aims to track developments in the milk sector in the Gujarat state. This study seeks to address the various important aspects of the dairy sector in Gujarat, such as the source of milk production, the average productivity of the unit and the cost of milk production. The study established the untapped demand for various dairy and dairy products in ethnically diversified rural urban groups in order to explore the diversity and consumer discovery to enhance the value of milk. The paper highlighted such policies as well as the schemes of dairy farming in Gujarat announced by government of Gujarat for milk creation to support the growth of milk production.

About the dairy market. While adding value to milk is inevitable if the profitability of the sector has to be improved, the same does not seem feasible unless its penetration is increased by the structured market.

The three-tier model of AMUL is reviewed for the assessment purpose as it plays vital role of dairy farming in the development of rural economy. The demand of milk projections in upcoming years indicates that the demand of milk is increasing day by day. The estimates enumerate that National Dairy Development Board (NDDB), the demand for milk is likely to reach 180 million tons in 2022.

Keywords: Dairy farming, Entrepreneurship, opportunities, livelihood, NDDB, rural development.

Introduction

In the world, milk production, the FAO (Food and Agriculture Organization) announced a rise of 1.46 percent from 800.2 million tonnes in 2016 to 811.9 million tonnes in 2017. The per capita milk supply in India during 1950-51 was 130 grams per day, which increased to 374 grams per day in 2017-18. Such promising figures reflect a sustained increase in milk and milk products for our growing population.

A thorough analysis of the Gujarat dairy market is offered by the latest report of the IMARC Group, entitled "Dairy Industry in Gujarat: Market Size, Development, Prices, Segment, Cooperatives, Private Dairies, Procurement and Distribution". In 2019, Gujarat's overall milk production was 15.4 trillion litres in volume. The state currently represents India's fifth largest dairy industry. The milk production in Gujarat mainly consists of cow and buffalo milk. The report's analysis concludes that cow milk dominates the total milk production, accounting for majority of the market share. According to the report, the Gujarat dairy market grew at a CAGR of 13% during 2014-2019.

This report has categorized the Gujarat dairy market into 18 major product segments, based on the product type:

1) Liquid milk, 2) Ghee, 3) Curd, 4) Paneer, 5) Ice cream, 6) Table Butter, 7) Skimmed milk, 8) Frozen/ flavored yoghurt, 9) Fresh cream, 10) Lassi, 11) Butter milk, 12) Cheese, 13) Flavored milk, 14) UHT milk, 15) Dairy whitener, 16) Sweet condensed milk, 17) Infant Food, 18) Malt based beverages.

The study offers a detailed overview of current and historical value and volume patterns, market share of key

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players and market forecasting for each of the product segments. Currently, the largest product segment in Gujarat is liquid milk, accounting for a majority of the market share.

Frozen/flavored yogurt, cheese, probiotic milk beverages, UHT milk and flavored milk are some of the fastest growing segments. This study also analyzed the competitive environment of Gujarat's dairy industry. Amul (Gujarat State Cooperative Milk Producers' Federation), Maahi Milk Producer Company Ltd and Vimal Dairy Ltd are some of the major players.

India is the world's top leader in overall annual milk production. Likewise, the state of Gujarat is also the nation's leading state for milk production. The pattern of "Amul" is well known and recognized by all the states in our country and some other nations as well. In our state, milk procurement through cooperative movement is central to them.

Twenty - Two Co-operative Dairy Unions have total 262.63 Lakh Litres Per Day milk install capacity and they procured 203.43 LLPD milk. During the year 2019-20 these 22 dairy unions have 99 chilling centres also having capacity of 70.97 LLPD of milk.

If we consider the largest milk producer countries so we get to know about it that India is on the top most position. For maintaining the position and to develop more, the ministers of India informed that the department generally has been implementing many dairy development schemes to supplement the efforts of the state governments to create necessary infrastructure across the country. The schemes are - Rashtriya Gokul Mission, National Program for Dairy Development (NPDD), and National Dairy Plan Phase 1, which is according to Dairy Entrepreneurship Development Scheme.

Sr. No.	Particulars	Unit	Figure
1	Total Bovine population (LC 2012)	Million	299.6
2	Adult Female Bovine (LC 2012)	Million	133.3
3	In Milk Bovine population (2015)	Million	88.35
4	In Milk animal productivity	KgPD	4.65
5	Milk Production (2015-16)	MMT	155.5
6	Per capita availability of Milk (2015-16)	gm PD	337
7	Rural retention (2015-16)	-	48% of Milk Production
8	Marketable Surplus (2015-16)	-	52% of Milk Production

Table 1. Brief Profile of Indian Dairy Sector

The average productivity of cattle and buffalo in the country is about 4.65 KgPD (2015 16) which is far below as compared to the productivity levels of In-milk animals in dairy developed nations.

Programs and schemes

Table 2. Activities of Milk Cooperatives of Gujarat state as per Animal Husbandry during the year2019-20

Sr. No.	Item	Achievement
1	No. of cattle camps	15,725
2	No. of cases treated at cattle camps	7,45,091
3	First Aid	3,37,232
4	Normal visits	2,50,254
5	Special visits	4,37,699
6	No. of animals vaccinated	1,025,185
7	Artificial Insemination	61,71,614

The government has implemented various dairy development schemes, namely the National Program for Dairy Development (NPDD), the National Dairy Plan (Phase-I), the Dairy Entrepreneurship Development Scheme (DEDS), the Dairy Processing and Infrastructure Development Fund, due to the performance and potential of the dairy sector to date (DIDF). Current provisions have been advanced in the 2020-21 budget to encourage the doubling of India's annual milk processing capacity from 53.5 million tons (mt) to 108 mt by 2025. Kisan Rail by Public Private Partnership (PPP) agreements are included in other clauses.

Value Addition: Way Ahead for More

Products like cheese, paneer, ghee, yoghurt, probiotic drinks etc. are value-added products in the dairy industry. These are products that have been generated by liquid milk alteration, enhancement via additives, segregation, etc. As per a Crisil report, the Rs. 25,000 crore value-added dairy products industry is set to outpace liquid milk sales by 2021.

Processing:

Due to increased demand for packaged fluid milk and milk, India's processed dairy segment is increasing diversified goods from dairies. The total installed processing capability of the milk industry, according to NDDB, there are approximately 43 million liters per day in the cooperative market, while the total reported processing. Industry estimates suggest that around 70 percent of the processed milk is sold as fluid milk, with the remainder being used for value processing. In India, packaged milk is often sold as pasteurized milk in different variants. Based on fat content. More than 0.5% fat and 8.7% snf). Variants available on the market include: full cream milk (6 percent fat and 6 percent fat) Strong nonfat (snf) 9.0 percent), uniform milk (4.5 percent fat and 8.5 percent snf), toned milk (3.0 Fat percent and snf 8.5 percent), double toned milk (fat 1.5 percent and snf9 percent) and skim milk (not skim milk) More than 0.5% fat and 8.7% snf).

The private dairy industry has a potential of 73 million liters per day.

Increasing the profitability of dairies

Milk procurement rates between April and December 2019 and for the year are projected to have increased by 19 percent.

Inflation is projected to be close in full fiscal terms, at 18-20 per cent year on year. On the other hand, milk retail prices have increased by 3-4% over April-December 2019, and are expected to be higher at for fiscal 2020, 5 percent.

The prices of main value-added items such as butter, ghee and skimmed products are shown by our interactions with stakeholders.

By the end of this fiscal year, milk powder (SMP) is projected to increase by 5 percent.

Although the percentage of dairy industry entrepreneurs is less than one percent, its coverage between the 51st and 56th NSSO rounds has increased from 0.43 percent to 0.88 percent. Similarly, during this time, the ice cream producers' share jumped from 6 percent to around 11 percent.

India is a leading dairy producer of milk; Co-operatives have a lot to do in the region. But, But, But, the majority of cooperative federations are not regulated by in professional terms. In reality, a lot of them, beyond Gujarat, like standard parastatals, inevitably led, they are being run via bureaucrats.

Cattle and Buffalo Development: Individual Beneficiary Programs

Competition Scheme for Milk Yield i.e Milk yield Competition Scheme

This scheme is intended to provide awards to promote owners of high-milk production animals in the state through the organization of competition for state-level milk yields. In each breed of cattle and buffalo in the sense of this competition.

Only for Gir and Kankrej Cattle 1st Prize of Rs.51,000/ - and for remaining breeds 1st Prize of Rs.25,000/- 2nd Prize of Rs.20,000/- 3rd Prize of Rs.15,000/- and runnerup will be allocated by the state government to the tune of Rs.5000/-in each event. To each competition entry a consolation prize of Rs.1,000 is allocated.

The primary goals of this scheme are as below.

- 1. Identify and locate the availability for breeding purposes of good quality and high milk-producing milk animals.
- 2. To educate cattle owners in a scientific manner to raise the cattle and to raise awareness and enable

the owner of livestock to maintain good high yield animals for the year.

Interest subsidy scheme for the establishment of 1 to 20 milk farms for animals

A major source of constant subsidiary income is dairy farming. Small and poor farmers can buy 1 to 20 animals according to their need for maintenance and capacity. If any bank recognized by Indian Reserve Bank penalty loan for any milk animal cow & buffalo, the recipient can receive interest subsidy @ 12 percent interest on the amount of the bank loan amount (as per unit cost of NABARD guide line).

Scheme for Assistance to Create 12 self-employed milk animal farms, 2018-2019 (for all category)

Intensive efforts are being made by the State Government to accelerate the development of rural people through the implementation of the Assistance Scheme to set up a dairy farm for 12 milk animals for self-employment for the year 2018-2019. (for all category). In this scheme, financial assistance for animal husbandry undertakings, such as interest subsidies on bank loans, earned interest subsidies on bank loans for the purchase of 12 animals and capital subsidies for shed building, the purchase of Chaff Cutter, Fogger, milking machinery and animal insurance for a period of 3 years. Government use to give importance to the village-level animal husbandry sector, making animal husbandry a pillar of rural employment and thus achieving the objective of doubling the income of farmers by 2022.

Accidental Animal Death Program Compensation i.e. Compensation for accidental Animal Death Scheme.

Animal Husbandry is an Agriculture Subsidiary to assist poor farmers. Some conditions, such as anthrax, bird flu, rabies, food poisoning, chemical poisoning, cases of snake bite, are present. For the aforementioned purposes, there is no provision to offer any help to the animal owner in the event of the death of their animals.

In such cases, animal owners lose their livestock and even their livelihoods. So that the animal owner can buy the replacement of his missing animal in these situations and continue earning his profits. So, the proposed relief assistance per animal is as below.

Cow: Rs.16,400/- (maximum 2 animals per household.)

Buffalo: Rs.16,400/- (2 animals/family maximum.)

Bullock: Rs.15,000/-(2 animals/family maximum.)

Heifers/Calves (Above six months)

Individual Beneficiary Scheme of Intensive Cattle Development Project (I.C.D.P.)

Table 3. Incentive to A.I. owners.	Born Female	Calf in indigenous cov	v by pure breeding.
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Name of the scheme	Incentive to A.I. owners. Born Female Calf in indigenous cow				
	by pure breeding.				
Objective	To avoid reducing the number of local pure Cow breeds,				
	namely Gir and Kankrej, and to increase it to be maintained				
	properly in the state.				
Who can avail?	The Gujarat State Livestock Owners.				
Scheme benefits	Rs.3000.00 reward to female calf owners born through A.I. By				
	pure indigenous cow breeding.				
Process to apply for the	Owners of livestock must apply online via the ikhedut portal				
scheme	and send documents to the nearby Taluka Veterinary				
	Dispensary.				
Implementing officer	Deputy/Assistant Director of Animal Husbandry, Respective				
	Council Panchayat District.				
Terms to be fulfilled	1. Proprietors of female calves born by A.I. You can app				
	online via pure breeding of indigenous cows on the -				
	ikhedut portal				
	2. Certificate of Artificial Insemination performed and				
	information should be given of the Semen Doses used.				
	3. Printing of the online application must be sent to the nearby				
	Veterinary Officer of Veterinary Dispensary for approval of the application form				
	4 One norman is aligible for the benefit of the scheme once a				
	4. One person is engible for the benefit of the scheme once a vear for one female calf.				
	5. Required documents (Xerox Copy) to be submitted along				
	with the application.				
	A. First-page Bank Passbook Canceled Bank Cheque or Xerox.				
	B. Card of Ration (Barcoded)				
	C. AI Certificate from which AI is carried out (as mentioned in				
	online application)				
	D. Card Aadhar				

(Source: Intensive Cattle Development Program | Programs & Schemes | Animal Husbandry | Agriculture & Cooperation (gujarat.gov.in)

In 2019 Exotic-Crossbred Milk Cattle has risen by 32.2 percent over the previous census of 2012 and Indigenous/ Non-Descript Milk Cattle increased slightly by 0.8% in the recent census.

According to the Indian context, we have 5 broad typologies of dairy systems that can be derived as below:

- Large commercial dairies (Mega dairies)
- Urban and semi urban dairies

- Research facilities and Government breeding farms.
- Small holders (both, within the cooperative framework as well as outside it)
- Gaushalas (or cattle shelters)

The average productivity of cattle and buffalo in the country is about 4.65 KgPD (2015-16) which is far below as compared to the productivity levels of In-milk animals in dairy developed nations.

Parameter	GDP	Population	Growth in per	Expenditure
	Growth (in	Growth (%)	capita income	Elasticity
	real term) %		(%)	
2015-16 to 2020-21	5.8	1.32	4.5	0.94
2015-16 to 2021-22	5.8	1.31	4.5	0.85
2015-16 to 2025-26	5.8	1.24	4.56	0.70
2015-16 to 2028-29	5.8	1.21	4.59	0.70
2015-16 to 2032-33	5.8	1.19	4.6	0.70
2015-16 to 2033-34	5.8	1.19	4.6	0.70

Table 4. The parameters considered for the projection are given below

(Source: Ministry of Agriculture and Welfare, Government of India, January 2018)

The above table explains that the projection of growth in per capita income is somehow consistent and the expenditure elasticity is comparatively reducing.

Year	Per capita demand	Population	Demand (million
	(grams per day)	(million)	tonnes)
2015-16 (actual)	333	1280.2	156
2020-21	409	1366.8	204
2021-22	417	1384.1	211
2025-26	456	1447.9	241
2028-29	502	1497.6	274
2032-33	571	1566.5	327
2033-34	590	1584.3	341

Table 5. According to the Projected demand of Milk is furnished as under

(Source: Ministry of Agriculture and Welfare, Government of India, January 2018)

As per the table the Per capita demand is rising from 2020-21 to 2033-34 from 333 grams to 590 grams. So here we can observe here that demand is rising.

It is very much essential for the rural milk producers with greater access to the organized milk processing industrial sector with respect to the interests of livelihood and economic well-being of the milk producers. The initiative will definitely ensure for remunerative prices to farmers for their produce and also to encourage more farmers to adopt dairying as a source of livelihood.



Figure 1: India's Bovine Population

Source: https://indiadairy.com/expert-article/dont-allow-it-to-be-cowed-down/

India, by contrast, has 109.85 million buffaloes, as per the latest Livestock Census for 2019. Moreover, as the accompanying chart shows, the country's buffalo population has been rising, even while cattle numbers have fallen during the last three decades. In 2018-19, buffaloes contributed to 91.82 million tones (mt) or 48.9% of our estimated total milk production of 187.75mt - more than the 51.26mt from crossbred/exotic cows and 38.57mt from indigenous/nondescript cattle. India also houses over 56% of the world's buffalo stock.

Dairy entrepreneurs can effectively contribute to the society in the areas mentioned below:

- 1. To educated youth, dairy entrepreneurs can create jobs for the large section.
- 2. In dairy sector due to diversification of product and innovative way of marketing, it definitely creates market opportunities for the indigenous available products.
- 3. The non-conventional resources like rain water, solar energy, agricultural by products and other locally available resources are utilized well.
- 4. The new technologies and new products are generally introduced by entrepreneurial spirit.
- 5. One can easily reduce the poverty level to some extent.

Constraints and Challenges faced by Dairy Farmers:

Major challenges being faced by Indian Dairy sector are given below which are identified by various literature review mentioned below the constraints.:

- Awareness camp, and training programs should be arranged
- Low Productivity of Indian bovine
- Imbalanced feeding to animals
- Limited access of milk producers to organized sector
- Age old infrastructure operating on obsolete technology
- Lack of organized credit system
- Lack of manufacturing facilities for Value Added Products.

Based on the below identified literature review it has been examined and analyzed that various constraints are observed and enlisted accordingly.

Gupta, etl al (2017) identified that Keeping in view of these constraints, it has been suggested that conclusive strategy should be awareness camps and training programs should be arranged regarding scientific animal health care and management practices to minimize the knowledge gap of the dairy farmers.

Rosie Woodroffe, Christl A. Donnelly (2006) constructed a "base model," including covariates likely to influence observed prevalence (see Materials and Methods). This model suggested that, as predicted, the prevalence of M. bovis infection increased with successive culls. This increased prevalence was particularly marked when multiple operations were used to complete each annual cull (details in supporting information).

Chaudhary and Intodia (2000) identified the major constraints as perceived by cattle owners in adoption of dairy practices as breeding constraints - inadequate knowledge of breeding practices (45.00%), high cost of cross bred cattle and superior quality bulls (44.40%) and perception of artificial insemination as unnatural method (37.00%), whereas feeding constraints poor irrigation facilities for growing green fodder (48.10%) and high cost of concentrate (42.50%). Management constraints such as lack of knowledge in weaning new born calves (80.00%), health constraints - lack of knowledge about cattle diseases and their control (36.60%), lack of veterinary clinic and health care centers (29.60%) and high cost of veterinary medicines (24.80%) and miscellaneous constraints were lack of educational programs on dairying (21.46%) and lack of trained rural youth in village (20.70%).

Anuj kumar et. al., (2002) reported that majority of dairy farmers faced moderate constraints under different categories of constraints such as management (80.47%), followed by breeding (66.41%), health care (55.47%) and feeding constraints (53.12%).

Aravind kumar and Vasantha kumar (2003) observed that the major constraints faced by small and marginal farmers in dairy farming were low price of milk (96.67% and100.00%), followed by high cost of feeds and fodder by high costs of feeds and fodders (93.33% and 100.00%), non-availability of land for fodder cultivation (86.67% and 96.67%), less fat content in crossbred cow milk (70.00% and 96.67%), and non-availability of loans and lengthy procedure (66.67% and 83.33%), respectively.

Manoharan et. al., (2003) observed that the major constraints faced by farmers in dairy farming were higher feed cost, low price for milk, high investment, infertility problem, low productivity, higher rate of calf mortality, frequently becoming sick, inadequate availability of grazing lands, costly veterinary treatment and aids.

Singh et. al., (2004) reported that the major constraints in rural livestock farming were feeds and fodder shortage, poor animal productivity, poor breeding facilities, poor veterinary services, poor livestock extension service and poor credit and marketing facilities.

High-risk spread is probably the result of the cattlebadger-BTB interaction, though there is potential for contributions from other clustered risk factors. Evidence that cattle-to-badger transmission is important is sparse (Woodroffe et al. 2006), however if true, seedings via cattle infections may contribute to the broadening of highrisk areas (figure in the electronic supplementary material).

Conclusion

The study revealed that the most value added is Major process for higher profits in the region of Gujarat. It has been found that the consumption of value-added dairy products occurs due to rising disposable income, urbanization, substantial annual growth rates of about 15-20 percent households of dual incomes and other demographic changes. This refers to goods such as milk whiteners, Butter, ghee, cottage cheese, flavored milk, ice cream, cheese, yogurt, butter, Milk, and sweets of ethnic origin.

Dr. Torsten Hemme, who was working as a Managing Director of the Dairy Research Network (IFCN) stated in 19th IFCN Dairy Conference on 14th June 2018: "More milk will be needed in the market. The increase of demand is not only due to more people living in the world, but also the per capita consumption will increase, due to growing prosperity and worldwide investments in dairy product development." In current scenario about 876million tone of milk is produced worldwide with Oceania, EU and India among the leading producers. Dr. Hemme said that by 2030, IFCN forecasts growth of worldwide milk production and demand in total by 35%. It has been observed from the available schemes for dairy farming in Gujarat is quite effective and dairy farmers will be benefitted by availing it in there dairy farming business. Therefor there are ample of opportunities for dairy farmers as well as employment seekers who are staying in Gujarat in rural areas as overall demand in the country is going to rise so by utilizing the benefits of Government of Gujarat Schemes, one can easily grow and earn huge returns. Rural area people should proceed with the value addition concept in dairy sector. Hence, Dairy farming is a rural cash cow.

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The Scope and Challenges of Agro-tourism in India

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Abstract

The aim of this paper is to discover the potential of agro-tourism in the Indian travel industry. This paper also refers to agro-tourism in India. The key difficulties that lie ahead for this industry are addressed, as well as possible solutions for overcoming them. The study is exploratory in nature. The paper looks to establish an in-depth understanding of the agricultural tourism. SWOT Research has been done on the agro-tourism to identify advantages and challenges. Several locations have been highlighted which are doing well with regards to agro-tourism in the state. The study noted that agro-tourism has vast social and economic benefits for rural people. Since India's economy is diverse, this segment can easily be accommodated in the diverse product portfolio of Indian tourism. Despite years of effort, it appears that the agro-tourism industry has yet to be firmly founded. Tourists find the items offered are simple to use and suit their needs. Increasing the aspirations of tourists will lead to increased demand in the products. This will help business establish itself within the industry. Each challenge must be tackled properly. This paper will assist those in the agro-tourism business. For policy makers, perceived issues need to be redressed with a shift in strategies.

Introduction

Over time, India's tourism industry has changed (Shekhar, Kumar, & Attri, 2017). Today's tourism products are not the same as those offered a decade ago. This is due to the changing tastes and preferences of tourists, as well as the opportunities that are presented as a result of external and internal factors. The Indian tourism industry is now concentrating on niche tourism rather than mass tourism1. This is due to the potential negative effects of mass tourism on the environment and the benefits of niche tourism in the country's socioeconomic development. In India, a number of niche tourism sectors are being promoted. Wedding tourism, food tourism, rural tourism, halal tourism, luxury tourism, reality tourism, and agrotourism are some of these sectors. Among all of these, agro-tourism has recently piqued the interest of policymakers. Agro-tourism, also known as agro-tourism, is defined as "a tourist's visit to a farm in a rural or suburban area in order to get close to nature." Agrotourism, according to the Maharashtra State Agri and Rural Tourism Co-Operative Federation Ltd - MART, is "an act of visiting a farm for the purpose of enjoyment, agriculture activities, and getting close to nature."

The government has only provided sporadic support for the growth of agro-tourism. The schemes and policies are only applicable to a few states. Maharashtra, for example, was so committed to the development of agrotourism that it enshrined it in the Maharashtra Tourism Policy 2016.

Genesis of Agro-tourism:

Given India's topography, the concept of rural tourism has gained traction as an additional source of revenue in recent years, drawing attention to the rural belt, which is home to a large portion of the country's population. Recognizing that the government is encouraging active rural tourism in order to expand the rural segment's revenue-generating options. Rural Tourism was proposed by the Ministry in 2002-03 with the goal of showcasing art, culture, and heritage through rural life in villages and rural locations. Villages with core competencies in art and craft, handloom, and textiles, as well as an asset base in the natural environment, such as natural Flora and Fauna, were considered. The goal is to benefit the rural community economically and socially, as well as to allow tourists and the rural population to interact for a mutually enriching experience. Village tourism is also promoted with the goal of generating revenue for rural communities through tourist visits, thereby halting or at least slowing the exodus from rural to urban areas. While only physical infrastructure (Hardware or HW) development activities were undertaken in the first two years of the scheme, from 2004-05 capacity building (Software or SW) activities

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were also undertaken. The plan scheme 'Product/ Infrastructure development for destinations and circuits' has provided funds for the HW components of rural tourism projects (RTPs) (PIDDC). The GOI-UNDP Endogenous Projects scheme provided funding for the SW components of 36 RTPs sanctioned in 2004-05 and 2005-06. The plan scheme 'Capacity Building for Service Providers' has funded all SW components sanctioned since 2006-07. (CBSP). The Ministry of Tourism had sanctioned 169 rural tourism sites in 28 states and union territories as of February 28, 2011. The Village Level Council (VLC) is an interactive forum for local community participation in project work plans, which is backed up by other community-level institutions. Agro-tourism is an offshoot of rural tourism that has a lot of potential in India. Because agriculture is the primary source of income in India and other developing countries, particularly Asian economies, these countries must consider allied income generation strategies, one of which is Agro-tourism. Agricultural tourism refers to the practise of visiting a working farm or other agricultural, horticultural, or agribusiness operation for the purpose of enjoyment, education, or active participation in the farm's or operation's activities. Agro-tourism, in general, is the practise of attracting tourists to an area or areas that are primarily used for agricultural purposes.

Agro-tourism, on the other hand, is small-scale, lowimpact, and, in most cases, educational. Because landowners run the majority of Maharashtra's farms, the possibilities for individuality and customization are endless. To be successful, many agro-tourism activities only require a small farm crew. Farm tours, bed and breakfasts, tractor/bullock card rides, grapes, mangoes, and other horticulture farms, by product farms, birds/animal zoos, and a variety of other activities, for example, can all be run with little additional labour investment. India ranks second in the world in farm output. Agriculture and associated industries such as forestry, mining, and fishing accounted for 15.7 percent of GDP in 2009-10 and employed 52.1 percent of the total workforce; despite a steady decline in its GDP share, agriculture remains India's largest economic sector and a major part of the country's overall socio-economic growth. International comparisons, on the other hand, reveal that the average yield in India is only 30% to 50% of the highest average yield in other parts of the world, indicating a low productivity in Indian agriculture. Tourism in India is growing as an important component of the service sector,

contributing 6.23 percent to the national GDP and 8.78 percent of total employment in the country. With this backdrop, the researchers believe that agro-tourism can play a significant role in better utilising India's agricultural land, generating additional income for farmers, and creating jobs.

Agro-tourism

Agro-tourism is defined as travel that includes both agricultural and rural settings as well as agricultural products as part of a tourism experience. It's possible that the product will be "experience itself." Agro-tourism is defined as "a set of activities, services, and amenities provided by farmers and rural residents in order to attract tourists to their area and generate additional revenue for their businesses." (Klase, 1994, citing Gannon, 1988). In India, agro-tourism is a novel source of income for enterprising farmers. India's economy is based on agriculture. The agricultural sector's contribution to GDP is decreasing, and farmers are finding it difficult to continue their farming operations without additional income. Whereas tourism is thought to be a tool for job creation, poverty alleviation, and development, agro-tourism brings the declining and booming sectors together.

There are primarily three basic principles of agro-tourism which includes providing something for visitors to see, such as animals, birds, farms, village culture, clothing, and festivals. It also provides activities for visitors, such as participating in agricultural operations, camel and buffalo rides, cooking, and rural games such as gillidanda and gotti (marble etc.). Alongwith the above benefits, agrotourism also provides a purchase option for visitors: Rural crafts, clothing materials, and farm gate fresh processed food are just a few of the items available.

There are three major factors that contribute to the success of agro-tourism as a service - Farmer, Village and Agriculture Field. In the vast majority of cases, the farmer is less educated, less exposed, and more innocent to outsiders as guests (like gods) who are treated with open arms and without any commercial motive. He entertains the guest while also entertaining himself, and he fills all of the service gaps in the process. As a result, he's a natural businessperson. Due to its remote location, the village lacks urban amenities but is rich in natural resources. The natural resources themselves are the investment. Each field is distinct, which adds to the urban population's appeal. This is the rural people's incentive wealth.

There are various benefits of agro-tourism it brings major primary sector agriculture and major service sector tourism closer together, resulting in a win-win situation for both sectors. The tourism industry has the potential to grow. The agriculture sector has the capacity to absorb tourism expansion.

According to the discussions, the factors play a major role in the success of any agro-tourism venture are accommodation, meals for tourists, attractions, connectivity, medical facilities, risk and liability in case of accidents, entertainment programs, safety and security aspects and outdoor recreational activities.

Scope of Agro-tourism

- A low-cost gateway: Food, lodging, recreation, travel, and tourism are all inexpensive, broadening the scope of tourism.
- Urban curiosity about farming and life style: Agrotourism, which includes villages and agriculture, has the potential to satisfy the urban segment's curiosity by allowing them to re-discover the rich diversity of rural life.
- Strong family-friendly recreational activities, such as rural games, festivals, food, and clothing.
- Finding solace in a nature-friendly lifestyle: Agrotourism is built on peace and tranquilly.
- Nostalgia for their farm roots: For visitors, it's like going back to their roots.
- Agri-educational Tourism's value in spreading knowledge about agriculture science to urban students who are moving at the speed of technology.

Socio-Economic importance of Agro-Tourism Industry:

Because of its varied potential, the development of the agro-tourism industry would be extremely beneficial to both the tourism industry and the farmers involved. The following section lists and discusses some of the potential benefits -

Have an authentic contact with rural life - People have lost touch with their rural roots as a result of rapid urbanisation and population migration from villages to cities. Agro-tourism development aids in the rejuvenation of such people's ties to rural India. For those who have never visited a village, this segment serves as the only way to get a taste of rural India. Boost the ailing agriculture sector's revenue-earning potential - Agricultural produce income is low due to low profit margins, high supply, and other factors. Farmers can use agro-tourism as a way to supplement their income and better support their families.

Reduce disguised unemployment in the agriculture sector - In India's agriculture industry, disguised unemployment is a problem. The industry employs far more people than is required, resulting in low productivity. When such people, primarily youth, are given job opportunities in other sectors, the problem will be alleviated, and unemployed people in the villages will be able to find work.

Fostering community relationships - Indian social values are well-known around the world. The idea that "the world is our family" is deeply embedded in our culture and values. This concept is strengthened by agro-tourism. It helps to strengthen the notion of unity in diversity by bringing people from various communities together. Agrotourism allows people to interact and learn about different cultures, values, traditions, and cuisines.

Sustainable Development - Agro-tourism contributes to the region's long-term development. For starters, it can serve as a complementary form of tourism, easing the burden on overburdened tourist destinations. Second, it promotes regional green development.

Service-sector and primary-sector integration - Tourism is a service-sector industry, whereas agriculture is a primary-sector industry. As a result, agro-tourism is a synergy of the primary and service sectors that benefits both. It gives the tourism industry a new type of tourism, and it improves the livelihood of the primary sector.

Infrastructure Development - In order to develop a tourism destination, some infrastructure is required, such as roads, clean water, drainage systems, hotels, homestay units, electricity, and so on. Tourism development encourages the development of other infrastructure. The funds generated by the tourism industry can also be used to improve rural infrastructure.

Growth of Niche Tourism - As agro-tourism grows, so does the growth of other niche tourism in the area, such as food tourism, reality tourism, wellness tourism, and so on. As a result of the development of one type, several others emerge. The tourism industry in the area will benefit greatly as a result of this.

Review of Literature:

According to their understanding, several researchers have defined agro-tourism. Studies have been carried out to determine the potential benefits of agro-tourism to the industry and economy. The studies also go over the challenges that the industry must overcome. The researchers' goal in this research was to determine the potential of agro-tourism. (Na Songkhla & Somboonsuke, 2012) investigated the effects of agrotourism on the local agricultural population in Thailand's Chang Klang district. According to the study, the income from tourism is greater than the income from agriculture for farmers as a result of increased tourism activity. (Hamzah, et al., 2012) investigated the potential socioeconomic benefits that the agro-tourism industry can provide to a Malaysian Desa Wawasan nelayan community. According to the findings, agro-tourism can help to promote sustainable tourism development while also strengthening the social skills and ties of the community involved. (Phandee & Pornpatchara, 2012) investigated the development of suitable agriculture areas for agriculture tourism. The researcher established his own integrated farming as a model for agro-tourism development. According to the findings, rural areas make the best use of land for agro-tourism purposes. The development of agro-tourism in Maharashtra was studied by (Kumbhar Vijay M, 2013). The study created a suitable framework for the development of agro-tourism while taking into account the needs of marginal and small farmers. On the basis of the challenges identified, the study also made recommendations for agro-tourism. According to (Shrikrishna Gulabrao Walke, 2013), agro-tourism can play an important role in long-term tourism development. The study examined agro-tourism from the perspectives of both agribusinesses and tourists. (Samjetsabam Pinky, 2014) investigated agro-tourism from a farmer's perspective. The research provides insight into potential agro-tourism entrepreneurs. Agro-tourism was also identified as having a number of issues, according to the study. (Ahsanath.MK, 2016) attempted to investigate the agro-tourism potential in the state of Karnataka. The study emphasised the significance of various regions in the state that could be developed as agro-tourism destinations. (Prasanna Shembekar, 2016) investigated the current state of agro-tourism in Nagpur. The study also looked at the potential for agro-tourism in the study area, as well as its limitations. According to (Priyanka & Manoj, 2016), the overall potential of agro-tourism can only be

realised if the best strategies for overcoming the challenges are developed and implemented. (four) The study identified major obstacles to agro-tourism and offered solutions to overcome them. (Srivastava, 2016) gives an example of how people who work in agriculture can supplement their income by using agro-tourism. In order to promote agro-tourism in the study area, the study recommends holding festivals, trade shows, and sporting events. (Thorat & Suryawanshi, 2017) investigated the level of agro-tourism development and potential in the Junnair tehsil of Maharashtra's Pune district. To determine the potential of agro-tourism in the study area, the researcher created an agro-tourism competitive index using a geographic information system and a physiographic index.

According to (Chandrashekhara Y, 2018), agro-tourism is not only a way to promote sustainability in the tourism industry, but it can also be used to learn about rural India. The study emphasised the role of agro-tourism in indirectly creating jobs in the agricultural sector. The majority of the literature on agro-tourism focuses on its benefits and drawbacks. There hasn't been much research done to see how the agro-tourism industry might develop in the future. Furthermore, the life cycle position of the agrotourism industry must be determined so that actions in the form of industry development strategies can be taken. By identifying the position of the agro-tourism industry in the Product Life Cycle model, this study attempts to fill a gap in the existing literature. In addition, using Philip Kotler's five-level product model, an attempt was made to determine what changes can be expected in the agrotourism industry in the near future. Finally, the limitations of the agro-tourism industry are discussed, along with recommendations for how to overcome them.

Research Methodology:

This research is exploratory in nature, meaning it is being carried out in order to gain a comprehensive understanding of the agro-tourism industry in India. The information gathered for the paper is secondary. Printed and published research papers, chapters, and articles on the research topic are among the data sources. Views and reports published by the Ministry of Tourism, Government of India, and other public and private agencies working in the field of tourism in the country are also included in the data sources. For the analysis of the possibilities and prospects of the agro-tourism industry in India, the study incorporates the Product Life Cycle model and Kotler's 5 Levels of Product model. A SWOT analysis of the Indian agro-tourism industry was conducted to better understand the industry's strengths, weaknesses, opportunities, and threats.

Prospects of Agro-tourism in India:

According to Agro-tourism Development Corporation reports and statistics, 0.40 million, 0.53 million, and 0.7 million tourists visited Agro Tourist centres in 2014, 2015, and 2016, respectively. Tourists who have taken advantage of agro-tourism have generated approximately INR 35.79 million in revenue so far. These figures are encouraging because they demonstrate the potential of agro-tourism to contribute to the country's economic development. The feasibility study for agro-tourism conducted by ATDC has some promising results for the project. Agro-tourism is not only economically viable, but also commercially and technologically viable, making it a cash cow for planning agencies if implemented and executed strategically. According to the World Bank, agricultural land accounts for roughly 60% of India's total land area.

In the modern era, India has always been an agrarian economy. Agriculture has been India's strength since its golden days, with more than half of the population employed in the sector. As a result, India is an excellent location for the development of the agro-tourism industry. Farmers in states like Haryana, Punjab, and parts of Uttar Pradesh with large plantations and lush green farms can develop tourism destinations. This would also benefit farmers in related industries such as dairy products, the production of manure from cow dung, and the production of organic foods, as they would be able to directly meet and sell their products to tourists at a higher profit margin. In order to get a more in-depth look at India's agrotourism industry, the following section includes a SWOT analysis. The benefits that the development of the agrotourism industry would bring to the Indian economy can be determined by identifying the strengths and opportunities. It would also highlight the challenges that arise in the form of threats and weaknesses that must be addressed in order for the segment to develop efficiently.

SWOT Analysis

Strengths –	Weaknesses –
• The agrarian nature of the Indian	• Lack of a developed allied sector
economy	• Agro-tourism is under-promoted
• The availability of resources for agro-	Agro-tourism destinations are
tourism	inaccessible
• The agriculture sector's large employment	• Destination infrastructure is lacking
base	• Attractiveness is lacking
	• Stakeholder integration is lacking
Opportunities –	Threats –
• Agro-tourism as a tool for job creation	• Lack of demand threat
• Contribution to sustainable development	• Inefficient investment (opportunity
• Development of theme-based tourism	cost)
circuits	• Competition from other niche segments
• Infrastructure development at destinations	• Agro-tourism destinations face security
• Development of niche tourism segments	concerns

There are certain conclusions that can be drawn from a SWOT analysis. Firstly, because of its agrarian economy, India has a lot of potential for agro-tourism. Infrastructure is lacking at agro-tourism destinations, despite the availability of resources. The agro-tourism industry's primary weakness is a lack of promotion and marketing. Threats and Weaknesses will have a significant negative impact on agro-tourism destinations. Agro-tourism has the potential to contribute significantly to the tourism industry's long-term sustainability.

Popular Destinations for agro-tourism in India:

Despite the fact that the agro-tourism industry is a relatively new industry, there are a number of tourist destinations in the country that have done well. Agriculture is the dominant industry in states like Haryana, Uttar Pradesh, and Punjab, but they have yet to embrace agrotourism. Agro-tourism is thriving in South and Central India, particularly in states like Maharashtra, Kerala, and Karnataka, which have large tea, coffee, and jute plantations. The following are some of the agro-tourism destinations that have been identified.

Maharashtra's Baramati Agro-tourism Center offers agro tourist activities such as animal feeding, learning to care for domestic animals, milking a cow, agricultural programmes and tours, fairs and exhibitions of agricultural produce, and home-cooked cuisine to gastronomical tourists.

Dewalokam farmstay retreat in Kerala is well-known for incorporating environmentally friendly and sustainable practises into the tourism industry. This farmstay also serves authentic Kerala cuisine, using self-grown vegetables, fruits, and spices.

Maachli, Maharashtra - This farmstay is known for providing humans with a connection to nature, and it works on the concept of sustainable tourism. Nature lovers consider this location to be heaven. Visitors seeking respite from their stressful lives are drawn to the scenic beauty.

Goa's Dudhsagar plantation - located in a tropical garden, this location grows a variety of indigenous and exotic spices. It also has a local distillery and brewery. This place is a must-see for agro-tourism, with watering from a well, swimming in a natural lake, and living with a variety of animals.

Destiny farmstay, Tamil Nadu - This location is not only ideal for agro-tourism, but it also caters to wellness tourists looking to unwind a bit in the midst of nature.

Citrus County, Punjab - Located on 70 acres of land, this farmstay welcomes visitors to experience rural Punjab. The farmstay's main activities include organising local cuisine tours, trips to the dairy, events, and participation in some local events to give guests a taste of Punjabi rural life.

Tathagata farms, West Bengal - Located in a tea garden with a magnificent view of the Great Himalayas, this farmstay also has the essential tourist amenities. Fishing in the local pond, a village walk with a guide explaining the destination's cultural significance, and community interaction are all popular activities.

The Goat Village, Uttarakhand - This initiative aims to create a product that provides an agro-tourism, ecotourism, and rural tourism experience. The goat farming, which is done on a large scale, is the main attraction here. Himalayan Orchard, Himachal Pradesh - The orchard contains a diverse range of trees, including Apple, Pear, Apricot, Cherry, and Walnuts. This farmstay's main goal is to promote responsible tourism. Milking, cheese making, organic farming, and community tourism are the main activities.

Nirvana Organic Farm, Rajasthan - The main draw is the opportunity to interact with the local community while also taking in the natural beauty. Local children play games like gulli-danda and hop-scotch to help build relationships.

Role of Agro-tourism in Sustainable Development of Tourism Industry:

Agro-tourism has the potential to play a critical role in India's tourism industry's long-term development. Consider the state of Himachal Pradesh, which is located in India's northern Himalayan Belt. According to statistics, the majority of tourism visits occur in the Shimla, Kullu, and Kangra districts. The extent has reached the point where the destinations in this area are either exhausted or on the verge of exhaustion. Over the last few decades, they have offered the same type of tourism. If tourism products are expanded at such destinations, agro-tourism can aid in development. Farmlands can be found in Shimla, Kinnaur, Sirmour, and a number of other districts. Apple plantations can be found on the outskirts of Shimla and Kinnaur. The burden of tourists from over-exploited and exhausted tourism destinations can be shifted to newly developed tourism destinations by developing agrotourism in such places. Destination Discontinuity is the process by which an existing and flourishing destination transfers its tourist flow to another destination. The desired goal of achieving sustainability through the tourism industry can be achieved through destination discontinuity. Incorporating agro-tourism with the destination discontinuity model would achieve a dual goal: first, it would aid in the development of alternative forms of tourism or niche tourism, and second, it would aid in the above-mentioned goal of sustainable development. Agriculture and tourism are two industries in Himachal Pradesh that contribute significantly to the state's GDP. The development of agro-tourism is nothing more than the fusion of these two industries. As a result, Himachal Pradesh and other states like Uttar Pradesh, Haryana, Punjab, and Bihar could benefit greatly from agro-tourism as a product. Another option for agro-tourism is to combine it with rural tourism and ecotourism to create a one-of-a-kind tourism product. Multiple niche tourisms,

such as food tourism, wellness tourism, reality tourism, agro-tourism, and rural tourism, could be combined into a package. This would increase the average length of stay of tourists at tourist destinations, resulting in increased revenue. This revenue would not only provide more income to the farmstay owners and the surrounding communities, but it would also significantly aid in the development of infrastructure. The growth of responsible tourism in the industry has been directly linked to the development of agro-tourism. Such an innovative tourism product also aids in changing the destination's brand image, making it easier to communicate the marketing plan to the target audience. The government has developed several circuits based on theme-based integrated tourist circuits, though they are primarily focused on religious and adventure tourism. Interconnected agrotourism destinations could attract tourists, reducing the need for aggressive marketing. If tourists are kept engaged in agro-tourism and their satisfaction is guaranteed, it will reduce their reliance on traditional tourism activities, thereby protecting destinations that are overburdened or completely exhausted from a tourism standpoint. Agrotourism would also increase the destination's carrying

capacity. The carrying capacity of a destination would be increased if farm resources were used for tourism purposes. In addition, by developing agro-tourism in the region, several destinations with dwindling carrying capacity can be protected. It would be less expensive if their satisfaction was guaranteed.

Possibilities in Agro-tourism industry in India:

A product, according to Philip Kotler, has five dimensions or levels. Core product, Actual product, Expected product, Augmented product, and Potential Product are the five categories. Agro-tourism is a product that the tourism industry provides. As a result, it has the same dimensions as any other product.

These dimensions are strategically important because they change in a dynamic environment. Any change in any of the dimensions would necessitate a complete overhaul of the product manufacturer's or service provider's current product segmentation, targeting, and positioning strategies and policies. A proper STP is required to ensure the product's success on the market. The dimensions of Agro-tourism are shown in the table below -

Product Level	Meaning	In Agro-tourism
Core Product	This is the basic product available.	The most basic service provided by agro-tourism is an invitation to visit farmland.
Actual Product	The other attributes which go along with the product.	It includes a rural India experience, knowledge of domestic places, culture, people, and cuisines, as well as a social experience of interacting with a different community.
Expected Product	This is what customers want to encounter in order to have a good experience.	Making the destination accessible; providing maps, information brochures with brief information about important places, major attractions, and disaster management mechanisms; providing minimum infrastructure for enhancing tourism experience while preserving nature and farmlands; making the destination accessible; providing tour guides with complete knowledge of the local area; providing minimum infrastructure for enhancing tourism experience while preserving nature and farmlands; making the destination accessible; providing maps, information brochures with brief information about important places, major attractions, and information about disaster management mechanisms; Tourists should be welcomed at markets (should be stocked with memorable souvenirs related to the place)
Augmented Product	This is something beyond the customer's expectations.	Creating trade fairs and exhibitions that provide tourists with information and locally made handicraft goods; promoting local cuisine in food festivals and making locally available ingredients to tourists; creating tailor-made agro-tourism packages or developing agro-tourism themed circuits connecting nearby agro-tourism destinations; providing incentives to tourists who take advantage of this niche tourism.
Potential Product	This is what a product could be in the future.	Technology must be used to innovate in the agro- tourism industry. Virtual tourism can be promoted through digitalization, which can provide tourists with a short experience to motivate them to engage in agro-tourism; marketing can be done on social media to increase reach; and a chat room for agro-tourists can be developed where they can share their experiences and suggestions.

The product level table communicates what the product could evolve into and how much it could evolve in the future. The potential for agro-tourism to develop is enormous. The core product is the most basic service provided to tourists, such as a visit to a farm or a plantation. The augmented and expected levels of product are the most important things to keep an eye on. The ability to beat one's competition will be determined by one's enhanced level. By providing more than what tourists want, the agro-tourism industry can easily gain an advantage over its competitors in attracting tourists, such as rural tourism and eco-tourism. The potential product level is the one that is currently out of reach of the product but will undoubtedly be seen in the future. It's a vision of what the product might become in the future. This research is crucial. This is due to the fact that it changes with the passage of time. After a few years, what is Augmented or Potential today could become Actual or Expected.

As a result, it is critical that industry continues to analyse its product level from time to time in order to better understand customer needs and wants and, as a result, plan changes in its product to better meet those needs. Agro-tourism, like any other product, has a life cycle.

A product life cycle describes how a product progresses through several stages from launch to demise, each with its own set of characteristics that influence the product's plans and strategies. The agro-tourism industry in India is in the early stages of development, according to the PLC curve.

The introduction stage is when the product is first introduced and a lot of effort is put into making people aware of it. The main goal of the introductory stage is to create demand for the product by creating a brand for it. Although the agro-tourism industry has been around for a decade, it has yet to be fully launched by the national and many state tourism boards. This is why it is still in the developmental stage of its life cycle. The following are the characteristics of agro-tourism that place it in the PLC's early stages -

Low demand - There is still a lack of demand for agrotourism. There are only a few destinations that are doing well, while the majority are in poor condition.

Lack of product awareness- The lack of demand can be attributed to a lack of product awareness among tourists. The lack of awareness is due to the agencies' lack of marketing efforts to promote agro-tourism.

The introduction stage is when the product is first introduced and a lot of effort is put into making people aware of it.

Efforts to raise product awareness- During the introduction stage, the supply side stakeholders in agrotourism concentrate their efforts on raising product awareness and developing a brand name for the product. To inform tourists about the product, a variety of promotional schemes and campaigns are launched.

Customers are persuaded to try the product; tourists are enticed to participate in agro-tourism. They are persuaded to participate in agro-tourism through aggressive marketing or special discount packages.

The initial cost is high-the cost of setting up infrastructure is included in the initial cost. Because infrastructure has to be built from the ground up, the initial costs are high, necessitating government financial assistance.

Because the industry is still in its infancy, the strategies must be tailored to its specific characteristics. Due to the fact that the product is new, extensive market research should be conducted. Tourists who will act as customers must be identified, and their needs must be assessed and effectively addressed. To increase the customer base, a detailed marketing plan must be developed to communicate about the product offering to tourists. Because it is a niche tourism product, it requires careful segmentation and positioning to be successful. Publicity and sales promotion activities must be carried out in order to create demand for the product, while keeping in mind the project's budget. Discount coupons for tour packages, as well as other monetary and non-monetary incentives, should be grouped together to persuade tourists to try agro-tourism at least once. The tourism industry will need to set up a separate fund for the product because this will increase the cost. The fund's goal would be to provide financial support to farmers who want to develop agrotourism on their property. This assistance must be conditional, with a portion of the revenue going toward infrastructure development at the destination and the tourism product lasting at least 10 years or longer. This would reduce the amount of money spent on nonproductive or non-essential purposes. The pricing of the product is also a feature of the introductory stage. The manufacturer's pricing policy is determined by his or her goals. It could use a skimming pricing strategy or a penetration pricing strategy. Similarly, agro-tourism can use either of the two approaches. If the prices charged at the outset are high, it is aimed at a specific market, namely the wealthy. This would be marketed as the product's unique selling proposition. However, if the charges are low, it will appeal to a large number of middle-class families. As a result, the developer's pricing policy is determined by his or her vision. In attracting tourists, the tourism industry can easily gain an advantage over competitors such as rural tourism and eco-tourism.

Challenges for Agro-tourism in India:

Even though agro-tourism holds a lot of promise in an agrarian economy like India, the grass isn't always green. This type of niche tourism has failed to deliver what was expected of it. This is due not only to external environmental threats, but also to flaws that arise as a

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result of industry's own limitations. The following section discusses some of the challenges -

Lack of product marketing- Despite the fact that agrotourism has socio-economic implications, it lacks a proper marketing programme for itself. The demand for agrotourism will not be sufficient to reap the benefits unless the people are informed and persuaded.

No place in Vision and Mission-Agro-tourism is absent from the vision and mission of planning agencies at the national and state levels in the country. It would be impossible to develop plans and strategies for the industry without adequate focus from the agencies.

Infrastructure Deficit- The agro-tourism industry necessitates high-quality infrastructure in rural areas. The main challenge is that this type of tourism can be found in places where basic infrastructure is lacking. Building and maintaining infrastructure will continue to be a difficult task for the government.

The Ancillary Nature of the Industry-Agro-tourism cannot currently be considered a full-fledged standalone product of the tourism industry capable of attracting tourists on its own. The truth is that visitors to a destination devote a small portion of their tour to it. fifteenth) As a result, it has not reached its full potential.

Lack of variety in offerings- The agro-tourism industry's offerings are limited. An adventure tourist, for example, can go rafting, hiking, bungee jumping, trekking, and other similar activities, whereas agro-tourism lacks such variety. Few tourists are willing to spend their time in this industry because it fails to provide a unique experience.

Low Demand and Supply- The number of tourists who participate in agro-tourism is not growing. These are rookie figures that should be increased. Because there is such a low demand for this product, few farmers are interested in developing it. As a result, the supply side is also constrained.

Stakeholders' lack of skills- Because the majority of farmers are uneducated, they lack the necessary skills to develop and maintain the agro-tourism product and related infrastructure. Furthermore, they lack proper marketing and management abilities. This creates a barrier to product development.

Conclusion and Suggestions:

Several conclusions can be drawn from the preceding discussion. First, the agro-tourism industry has potential

benefits that could benefit both the struggling agriculture sector and the growing tourism sector; second, there is a lot of room for improvement in the agro-tourism products offered by the Indian tourism industry; and third, the Indian agro-tourism industry is still in its infancy. As a result, there is a lot of room for development, and it will take some time before the benefits begin to outweigh the project's costs. As a result, policymakers must be patient for a while; and finally, while there are several challenges that must be addressed before agro-tourism can be fully developed and resources used to their full potential, one cannot deny the role it could play in the Indian economy's long-term socio-economic development. The rise of green consciousness and environmentalism among the younger generation has also aided the growth of the agro-tourism industry. A vision, as well as a strong commitment to achieving that vision through strategies, plans, and actions, are required. Several suggestions have been made to aid the growth of the agro-tourism industry -

Establish a training school for farmers-Training schools should be established to address the problem of a lack of skills among farmers, who are at the heart of agrotourism. These schools would teach them about tourist behaviour, how to develop tourism products, how to maintain infrastructure standards, and how to improve the quality of agro-tourism in India.

Provide government support for development- It is clear that the government has not provided much in the way of incentives for the development and promotion of agrotourism in India to date. One of the main reasons why policymakers are hesitant to include this niche segment in their policies and strategies is because of this. This initiative will not be able to succeed in the long run without the support of the government. The government should provide farmers with a minimum amount of financial assistance for infrastructure development and ensure that the infrastructure is well maintained. Subsidies should be provided, zero-interest loans should be made available, and the government should market agro-tourism centres.

Increase domestic demand-To address the issue of agrotourism's lack of demand, the government should promote agro-tourism on a national level. Schools and colleges should be encouraged to organise tours to such places. Increased demand would pique the supply side's interest, ensuring the industry's survival.

Increase product variety-New agro-tourism opportunities should be explored. Farmers should find new ways to

attract tourists by either innovating their product offerings or innovating their business practises. This would give players in the agro-tourism industry a distinct advantage.

Establish a central nodal agency and centralise funding-Agro-tourism should be centralised by establishing a nodal agency that would include all existing state-level agencies. This agency should focus on developing national plans and policies, as well as providing funding to all state agencies based on their visions and plans.

Incorporate agro-tourism into the Ministry of Tourism's vision and mission-Agro-tourism should be included in the Ministry of Tourism's vision and mission. This would make it easier to set aside funds in the country's budget for the agro-tourism industry. Industry will never achieve its objectives unless its efforts are coordinated.

Create an effective marketing program-One of the major challenges facing the agro-tourism industry is a lack of marketing. Marketing agro-tourism products entails not only communicating about the products, but also understanding the needs of agro-tourists and incorporating their demands into strategies. First and foremost, the government should consider how to market this industry so that people are aware of its existence.

Maintain reasonable infrastructure at tourist destinations-In order to ensure that tourist inflow is consistent, the government must construct and maintain a minimum level of tourism infrastructure at such locations. Proper hygiene should be ensured, as should safety and security measures, risk management mechanisms, and the availability of mobile phone signals, photographers, and restaurants.

Establish Agro-Tourist Centers (ATC) at the grassroots level- Regional centres should be established near such destinations to learn the fundamentals of the agro-tourism industry. The problems and areas for improvement in the industry should be communicated to the top level planning agencies by these centres. The presence of these centres would also benefit agro-tourists in the event of an emergency or in the event that they require any advice or solutions.

Create an agro-tourist database to better understand consumer demands and suggestions-An agro-tourist database could be created to discover the industry's positives and negatives. This database would also assist us in determining whether or not the tourist was satisfied and would return.

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Technology adoption - Facilitating insurance penetration in rural India

Manoj K Pandey* and Yogesh C. Joshi**

Abstract

The Indian insurance industry has been witnessing a paradigm shift in its working riding on the technological innovations & its adoption in business. Rural India traditionally had been a neglected segment because of higher cost associated with acquisition & servicing.

The new age digital technology working on SMAC has been a great help in reaching out to the rural belt. It all started with the integration of the branches of insurance companies through wide area network connectivity as first step. The availability of the mobile connectivity & growing use of the smart phone in rural belt has brought a shift in the entire business model. The Government's push for financial inclusion & people centric plans are other enabling factor adding to the fuel.

The acceptance of e-commerce in low tier cities & rural areas has also facilitated the online sale / service of insurance. The people are no more fearful about the use of internet based business dealing. Regulatory changes brought in distribution space have given rise to many internet based channels filling the gap which were arising because of geographical distance earlier.

Keywords: Insurance, Financial Inclusion, Insurance Penetration, InsureTech, Technology.

Introduction

Indian is known as a country of villages. As per latest census statistics around 68% of the population reside in rural belt & more than 50% people are associated with agriculture & related activities. Though the contribution of the agriculture & allied services in GDP has gone down to the level of 18% but the rural set up contributes immensely in the services sector& as per an estimate contribute around 50% of the GDP. The development pace in rural belt has been fast paced in last 20 years & the consumption patterns etc. have changed a lot. The experts are of the opinion that the traditional understanding of urban-rural divide is not more valid. The household are no more dependent solely on the agriculture produce but the inflow of money from the earning members in cities have added to the standard of leaving. The business portfolio of industries from consumer durable & FMCG reflect a changing face of rural India.

However the same can not be said for the insurance industry. The sale of insurance policies more from general insurance portfolio were not encouraging and till recently some of the insurance companies were getting fined for not fulfilling the minimum rural business obligations put by regulator.

The industry experts talk of the absence of the "need felt" & the "lack of awareness" as the two key factors for the low acceptance of insurance in rural belt. The related matters of unfriendly "terms & conditions" & the viability of the business in terms of "distribution & servicing cost" put insurance at a disadvantageous position. But the things have started to change as technology is bringing a paradigm shift in insurance business & so far neglected rural area is destined to get its due share.

"What we call digital is no longer a luxury or boardroom conversation now. The hyper speed of the internet, the kinds of solutions that are emerging and a number of startups thinking of ways to look at businesses, this has changed "said Mr. Tapan Singhel, MD & CEO of Bajaj Allianz General Insurance company in an interview given to The Hindu Business Line on December 31st, 2019. This very bold & futuristic statement coming from a leader of the insurance industry reflects the promising mood of the industry as a whole.

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Review of literature

The financial inclusion has been a top agenda for the governments across the world. Since it is also one of the key point in SDG on UN, it had been a sought after research area even for for the academicians. Because of the geographic spread, low saving potential & the unviable operational cost, banks & insurance companies avoided expanding their network in rural belt. Then Government had to take the route of nationalization of these industries to make the services available to the masses. The life insurance business was nationalized in year 1956, the banking in 1969 & 80 & the general insurance in 1972. These socialistic steps ensured that the bank / insurance companies opened branches even in not-profitable places keeping in to mind the service to the people at top of their agenda.

In last 20 years the gear got changed. The expansion of the network through "brick & mortar" branch set-up got replaced by alternate way of expanding the services. The use of technology & affiliate channels were the two main route. Off-late technology has been on forefront.

Thamodaran, V., & Ramesh, M. (2010) in their paper talked about the effectiveness of Information and communications technologies are a device to communicate rural people about to disseminate awareness, create interest and to stimulate enroll intentions of insurance. It enabled societies to improve on traditional modes of service delivery. It also helped in improvements in process effectiveness and efficiency.

Handoo, J. (2010) wrote about recent developments like formation of UIDAI, National Financial Switch-NPCI, enhancing the daily transaction limit of mobile banking. It also highlighted the favorable recommendation of use of mobile phones as a framework of financial inclusion in India and relaxation in banking correspondence model. They observed that financial inclusion policy environment in India had undergone a tremendous change and it was on verge of bringing more dynamic changes.

Rao, N. S., & Bhatnagar, M. H. (2012) found the need of 'technology with a human touch' which acts as a ladder to achieve the target of financial inclusiveness. Institutions should, therefore, take extra care to ensure that the poor are not driven away from banking because the technology interface being unfriendly. This required training the banks' frontline staff and managers as well as business correspondents on the human side of banking. Financial service providers needed to learn more about the consumers and new business models.

Bansal, S. (2014) in his paper concluded that modern information and communication technology (ICT) could as a tool to develop a platform to extend the financial services in remote areas. Technology intervention helped banks to reduce their cost, increase customer reachability, better management of business risk leading to financial inclusion.

Singh, A. (2017) talked about technology as an enabler in implementation of the financial inclusion initiative and various services being implemented by various agencies.. The banks and financial establishments needed to invest in technology to enable delivery of financial services in a transparent, righteous and equitable manner.

Gulati, A., Terway, P., & Hussain, S. (2018) recommended use of high technology and JAM trinity to link land records of farmers with their Aadhaar numbers and bank accounts for assessment and faster settlement of claims. They suggested creation of a portal linking Core Banking Solution (CBS) and insurance for real time information.

Nayak, B., Bhattacharyya, S. S., & Krishnamoorthy, B. (2019) identified three key themes for technology implementation in the social health insurance sector analytics for risk management, cost optimization for operations and enhancement of customer experience. It concluded that leveraging the Govt/Insurance companies can enhance the coverage of BoP population

Chatterjee, A. (2020) suggested that both financial institutions individually and in collaboration with mobile / internet service providers could improve the per capita growth in financial inclusion. However, it was observed that in developing countries, the role of ICT indicators in fostering financial inclusion and therefore growth was not very promising. From the policy perspective, it suggested more investment in educating people about the usage of ICT in formal banking sector.

Shen, Y., Hueng, C. J., & Hu, W. (2020) in their study in China concluded that just internet usage had no direct impact on financial inclusion. Rather, the direct impact came from the level of financial literacy and use of digital financial products. They concluded that to achieve the goal of advancing financial inclusion, Chinese policymakers needed improvement in the consumers' financial literacy & simple digital financial products. Review of the research papers including the above cited works clearly indicate that technology is the key element in bring financial inclusion to integrate those who are left. However it also suggest clearly that just the technology is not enough in itself. The related eco-system of the regulation, financial literacy, the simple product feature & the robost interlinking of related services are also equally needed.

Background of Insurance Industry of India:

The provision for safety, security & help which is the essence of the insurance c has been an integral part of human development itself. Our old traditional set-up of joint family is still the best insurance plan for any family. However, the commercial avatar of insurance started from marine / trade business in 16th century and since then it has travelled miles to become an integral part of the entire trade & economy sphere all around the world. India got its first local insurance sector completed its 150th year recently. The establishment of the office of Controller of Insurance & the enactment of the insurance act 1938 had been distinct milestones in India. This 1938 act continues to be the mother act for all acts, regulations & rules since then.

With the purpose of channelizing the saving of the citizens for nation building, Government of India nationalized life insurance business in 1956 and general insurance business in 1972. This socialistic step taken by the government ensured expansion of the insurance offices network even at district level. Our country witnessed an unprecedented economic crisis in early 90s & as per the dictate of the multilateral agencies & the trade blocks , the government had to agree for the opening up of the Indian market , including insurance. The strong emotional link with Govt. owned insurance companies , the attached sovereign guarantee of corpus in case of LIC & the strong unionized cadre delayed the process & the sector could open only in year 2000 with the entry of a private companies.

As per the IRDAI annual report 2019-20, there were 24 life insurance & 34 general insurance companies carrying on insurance business in the country. Out of these, seven were of public sector origin and the rest from private sector. For the fiscal year 2019-20 insurance industry underwrote a total premium of Rs.7.52 lakhs crores. The contribution of life insurance was that of Rs. 5.73 lakhs crores i.e. almost 75%. Indian continues to be life insurance dominated market compared to the world scenario where general insurance contribute more at about 55%. For the year 2019, the per capita premium (insurance density) was around \$78 while the contribution to the GDP (insurance penetration) was at 3.76%. These figures were merely \$11.5 & 2.71 in year 2001 when the sector got opened up. No doubt the industry has made a huge progress on business volume front but compared to the global average figure insurance density of \$818 & penetration figure of 7.3%, we have a long way to go.

One of the real highlight & the enabling development has been the arrival of the new set of channels of distribution. In 2000, we just had the provision of direct channel i.e. sale by salaries staff/official & tied agency channel. Now we have multiple channels in place including corporate agencies (mainly banks/NBFC), insurance brokers, online sale, web aggregator, MISP, PoSP, IMF & micro insurance to sale the policies.

The establishment of the regulatory office i.e. IRDAI ensured a proper control over development initiatives & regulatory control. Safeguarding the interest of the policy holders has been the top agenda for the IRDAI. It brought in place strict solvency & distribution related regulations. Getting new channels of distribution to reach to far flung places in country has also been an achievement. In the recent past, the IRDAI has been found to be very forward looking & open to experimentation with new ideas and Technologies by bringing "sandbox" approach in its working.

Rural Insurance - The present Stage

In our Indian set up a place is defined as rural when it confirm to the norm of not having a population base of over 5000 & the population density of over 400. It also mandates that a minimum of 25% of the adult workforce must be engaged in agriculture & allied occupation. As per 2011 census, India had in total 650244 villages units spread across the length& the width of the country.

As per the latest IRDAI annual report the distribution of the offices of life & general insurance companies as on March 31, 2020 were of the following order :

Category of Ins Co	No of offices in tier I & II (Urban)	No of offices in tier III to VI (Semi-urban & Rural)	Total No of offices	% of branches catering to rural belt
Public Sector	2398	2557	4955	51.60
Private Sector	5694	661	6355	10.10
Total	8092	3218	11310	28.45

Life Insurance

Category of	No of offices	No of offices in	Total no of	% of branches
Ins Co	in tier I & II	tier III to VI	offices	catering to rural
	(Urban)	(Semi-urban &		belt
		Rural)		
Public Sector	5157	2389	7546	31.65
Private Sector	2609	145	2655	5.46
Specialized	86	00	86	0%
Ins Co				
Total	7852	2534	10386	24.39

General Insurance & Spl. health insurance

(Source IRDAI Annual Report 2020)

As per 2011 census almost 68% of the Indian population resided in rural part &if we take the distribution of the offices across the city/rural base from the above chart, one can easily conclude that the rural business has not been on the agenda of the private general insurance companies. Thanks to the nationalization that PSUs companies have their presence in rural part.

Insurance has all along been a push product & the insurance companies had been using the services of the agents to sale / service of the policies. As the population is wide spread the effort & the related expense in getting a policy in rural belt is much higher than the urban centers. The situation becomes much more difficult in general insurance line of business as the commission payout in monetary terms is much less & that demotivates the agents to opt for agency in general insurance companies. The situation in life insurance is relatively better as because of the saving element being a part of the product offer , it does have a bit of attraction.

No wonder the general insurance companies have been reluctant in opening of the branch network in rural base.

To facilitate the availability of the insurance product to the rural areas, the regulator had to bring a regulation prescribing a minimum percentage of rural business for the insurance companies & that was linked with the age of the insurance companies. For general insurers, two per cent of gross premium income should be in the rural segment in the first year, which goes up to seven per cent from the ninth year onwards. In respect of stand-alone health insurers, it is 50 per cent of the obligations prescribed for non-life insurers. However such compulsions failed to bring the desired impacts & many of the companies paid penalty in their initial years of operation & many of them now just do little above the mandated volume.

Digital Technology - A new saviors

Last decade has seen a phenomenal growth in the field of digital technology. Social Media , Mobile , Artificial Intelligence & Cloud Computing (SMAC) as a pack have given a new direction to the business world. It has got the ability & potential to bridge the urban-rural gap. If someone in rural belt has a smart mobile & good internet connection at his /her disposal , he /she is as equipt as anyone in a metro city to transact the e-based business. The digital technology is transforming the business models & providing new opportunities. Insurance is one such domain which is using the digital platform to reach & tap the untapped markets.

As per the latest Statista data as of February, 2021 India had the around 62.4 crores active internet users. It

translates to arounf 45% of internet penetration. This figure was just 4% in year 2007. The number of smartphone users is at around 76 crores. Almost half of the mobile users are in rural belt. As per the survey conducted in year 2019 by Statista almost 55% of the internet users were of the age bracket 20-39 i.e. the young group. This digital reach is of immense benefit to the business providers in terms of not only reaching to the targeted audience with business promotion but also to transact business over it.

As found by the review of literature, the low awareness about the concept of insurance, lower availability / distribution, the trust factor, the higher servicing cost and in some of the cases even non- affordability are some of the easily identifiable reasons for the neglect of the rural India by banks & insurance companies.

The digital technology with its immense flexibility & inbuilt capabilities, has started giving alternate solution for all the issues / obstacles in place :

- Customer awareness & engagement
- Customer on-boarding
- Customer servicing
- Claim settlement

#Customer awareness & engagement

One of reason for people not purchasing insurance is the lack of awareness. In an initiative to connect & engage the potential customers, mainly the younger generation insurance companies are using the digital& social media platforms extensively. The beautiful text / audio / video marketing communications put on social media platforms reach to the urban / rural clients with same ease. The advertisement appeals used in these communication have also changed for the good. In place of the traditional appeal of "fear/ what if" the companies are using romance, humor, group activity & many other theses to get message across.

#24*7 prospect engagement

Insurance is a technical product & the prospective customer requires handholding for some time. They also require someone to clear their doubts & help them in selection of the products. Insurance companies are not providing such window through their website or dedicated "apps". The artificial intelligence driven voice/non-voice chatbox has replaced the earlier option talking on phone. This option is available 24*7*365 & can be used by

prospect at ease. With the continuous use & improvement these chatbots are now capable enough to handle 80-90% of the queries in retail business segment.

Customer on-boarding / distribution

The higher distribution cost because of the dispersed geography coupled with the low volume of business in rural an unviable business proposition for the insurance companies. The companies have started using online platforms / e-commerce route to distribute the products. Bajaj Allianz General was the pioneer in bringing a new approach by the name "Virtual Office" in 2014. It was also termed as a mobile tablet office or Tablet office on move. The tablet enables the sales official to access relevant information pertaining to a policy, its features, policy issuance, payment, etc. at the click of a button, at the customers' doorstep itself. The tablet also has the feature to upload documents which can directly be sent to the offices via image mailing for decision making. The detachable dongle also provides multiple payment option on online mode. This entire model was transparent and handled by company employee thereby it helps not only in reduction of the cost but eliminates the possibility of fraud.

The old & costly "brick & mortar" set up is being replaced by new age cost efficient third party alternate distributions channel in place which are helping sales/ servicing of the insurance in remotest part of the country seamlessly.

The sector regulator IRDAI had been very pro-active in bringing such relevant regulations & platforms.

The insurance companies have started using the Ministry of Information Technology promoted Common Service Center (CSC) network for the sale of pre-underwritten simple/small ticket size in rural belt. The entire platform is built on leveraging e-channel and works under Public-Private model. This arrangement has made it possible for rural people to get policies and services at their village/ panchayat level. It also provides a remunerative earning potential to educated rural youth in form Rural Authorized Person scheme (Insurance sales person). As per the IRDAI annual report, these CSCs transacted a premium volume of Rs 1154 Crores in financial year 2019-20 selling motor, personal accident, life & even crop insurance policies.

Government has a target of having more than 1 lakhs of such CSCs (at least one each in all panchayat) & in that way they would be like a mini insurance offices even at

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gram panchayat level. This would help a lot in insurance distribution.

In year 2017, IRDAI brought Insurance Self Network Platform regulation & allowed insurance companies & intermediaries to appoint Point of sale person (PoSP) to sale simple policies only through digital platform. channel which has started This was to make inroad in rural part with simple products so as to minimise mis-selling or dispute. As per the latest IRDAI report 220 insurance co/intermediaries have so far opted for this new opportunities & have on-boarded more than 5 lakhs PoSP, majority of them from rural background. One of #InsurTech broking company by brand name #TurtleMint has got more than 100000 PoSP on their roll. As the licencing norm has been relaxed, the industry is expecting a big surge in the number in very near future.

Motor Insurance Service Provider (MISP) is an another digital base initiative which is likely to bring a positive impact in rural side in motor insurance portfolio. The regulator has made provision of allowing all willing motor dealers to opt for insurance sales/ serving job. Now one need not go to a near by insurance office to get his / her policy buy / renewal , the same can be done at the nearest motor dealer office. Needless to mention , all these MISP points are well networked & the policies are issued in minutes times. Even they are to help claimants in their distress time.

The technology has made it possible for the companies to set-up mini offices having 2/3 staffs. Iffco Tokio General Insurance Co is one such organization which is having a concept of "bima Kendra" in rural part. "We are trying to open offices in smaller towns and rural areas and are working on smaller products that will cater to that segment of the society. The industry is working on customised bite size insurance products that have lower premium, shorter tenure but high volume" said Mr. Warinder Sinha, MD & CEO in his interview given to Indian Express.

Customer Servicing :

As insurance means protection against the uncertainties and the uncertainty can happen anytime so the insurer should also be available 24*7. Insurance companies have started using "chatbot" which can handle most of the queries including even the status of the claim. Almost all the big companies have now their own mobile app & they insist customer using the facilities there. These apps are technically very sound & allow a customer to conduct all insurance related transactions. The website, portals, app& the tools available there has made many of the services available at the click of the mouse for which one earlier needed a visit to office travelling far distances earlier. This has added to the trust factor making insurance accepted by the people even in rural part.

- Getting premium quotes on various products
- Getting instant information about branch and network hospital locations
- Getting a status update about a claim or policy
- Knowing claims procedure details
- Getting policy soft copy and even
- Buying insurance online

Quick Claim Settlement

The financial results of the insurance companies in public domain suggest that more than half of the companies in general insurance domain are making underwriting / operational losses. It simply mean they are paying claim more than the premium earned. Still the general perception about the insurance companies is negative. There are two factors leading to such impression. The first is of the terms & conditions & second is about the delay in claim settlement process. The digital technology has started helping at least in the second one in motor , health & home insurance to begin with.

Getting minor motors claims using the claim interface in mobile app is a common feature now. The companies have started extensive use of whatsapp / video etc. in claim assessment. This technology based initiative involves customer him/herself in the process of settlement of their motor claim up to the limit allowed by the insurance regulator IRDAI. All that a customer has to do in case of, say, a motor accident is to download the company's self service app" and click photographs of the car as directed by the app.

In the background, the company do the calculation of how much the loss should be. This assessment of loss is conveyed to the customer. If he/she agrees, the company transfer the money to his/her bank account.

There have been used cases of whatsappvideos for settlement of home / shop claims during J&K & Kerala floods. Such quick claim settlement adds value to the industry & raises the trust bar.

Government backed digital based insurance schemes

The financial inclusion agenda got a big impetus under the current Government with the announcement of the PM Jandhan Yojana on August 15th, 2014. It not only got more than 42 crores new bank accounts but provided an optional subsidized life & personal accident covers attached with bank accounts. This was extended even to those accounts which were there in operation. As per the latest data available on ministry of finance website 23.26 crores people had opted for the PM Suraksha Bima Yojna (PMSBY) and 10.27 crores under PM Jeevan Jyoti Bima Yojana (PMJJBY) to provide personal accident & Life insurance cover to the bank account holders under Pradhan Mantri Jan Dhan Yojana. These policies are fully digital driven & made available across India. Majority of the beneficiaries are people from rural back ground. As per the latest data till the closure of the financial year 2021, 465000 death claims worth Rs 9300 crores have been settled under these two schemes. The bank & insurance companies associated with these schemes have done a great job by making the claim process smooth. The rural mass witnessed the efficient/paperless insurance cover & the payouts thereon. This has proved to be a great way of making awareness about the need of insurance.

The rural economy revolves around the crop cycles & the farmers are always at risk with crop yield getting impacted by various perils. Crop insurance was there in existence for last 30 years or so but it was confined to few pockets only. The PM fasal Bima Yojana launched in year 2016 was a real pan India initiative providing an opportunity to farmers to have crop insurance at a heavily subsidized premium for the rabi & kharif cycles. The entire scheme architect is build around digital technology & has delivered a great service to the rural people. Introduction of this scheme brought crop insurance as the third largest line of business in the general insurance hierarchy.

The	performance of	the scheme in	last four y	vears as of	f 31/03/202	1 has beer	as follows :
Inc	per for mance of	the seneme m	last lour y	cars as or		a mas beer	1 as ionows .

Year	No of farmers using insurance cover (Cr.)	Gross premium collected (Cr.)	Claim settled
2016-17	5.83	21,573	16,759
2017-18	5.33	24,652	22,114
2018-19	5.76	29,357	28,004
2019-20	4.22	23,542	20,090

(Source : PM Fasal Bima website)

The scheme has been a savior for the farmers. Though there have been complaints also of delayed / less claim payouts but the stakeholders are working on it. There has been some modification in the scheme too.

The scheme is so much digital enabled that a farmer can buy crop insurance from the portal of the scheme & even file the claim.

The way forward is to get the services of specialised agencies to use satellites, remote-sensing data, unmanned aerial vehicles and artificial intelligence to assess crop yield estimates at the local unit level so as to reduce delays in settlements of claims.

PM Jan Aarogya Yojana (AyushnmanBharat) is the third ambitious plan from Government to ensure universal health cover to the needy people well identified by socio economic census data 2011. Under this scheme 10.74 crores of households (aroung 50 crore people) are provided a 5 lakhs family floater medical cover. As on March, 2021 more than 10 crores of the family have already been given the card. Out of these 10.74 crore house hold 8.30 crores are from rural belt. This scheme has extended the hospitalization benefit to more than 1.65 crores till march, 20021 through 20k empaneled hospital across country.

Like all other plan this too is digitally driven & the beneficiary can have a full cash less hospitalization facility. The success of these schemes are attributable to the digital connectivity & architect part from the push from the Government.

Way Forward

Rural India provides an untapped market potential to the insurance companies in all lines of business be it life, general or medical. With around 65% of population base

& having reasonably good income flow rural India is a bright opportunity not only for insurance but for all industry sectors. The strong push from the government for financial inclusion has given a strong boost to provide banking & insurance services to the village people.

Customer centric approach, affordable pricing & ease of transacting business are the three crucial points which can help insurance companies making good inroad. Fortunately, the new technology is making all these three converge at one place. The growing use of technology based third party distribution network is giving a good cost arbitrage to the insurance companies. The new age #fintech & #insuretech venture are bringing new opportunities.

We have started witnessing the disruption in insurance industry & the days are not far away when the urbanrural gaps would be a matter of history.

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An Exploratory Study on Social Media Penetration in Rural India: Reasons and Initiatives

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Abstract

This study aims to understand the Government's initiatives to overcome the lower social media penetration in rural India by considering the current scenario and its reasons. An exploratory study is undertaken by visiting Government dossiers presented at question-answer sessions in parliament, census records, white papers, global /national institution reports, statistical portals, research papers, websites etcetera for secondary data. Emphasis is on the technical rural infrastructure development in electronics and broadcasting. This study also emphasizes supportive infrastructures such as power, literacy, and poverty reduction. Its inference is to enhance the accessibility and quality of information dissipation to end-users via social networks, which is considered as a pivotal element to escalate communication among different entities such as people and systems that will transform the Indian rural economy.

Keywords: Social media, Social network, Rural India, Social media penetration, Government Initiatives, Technical Infrastructure, Supportive infrastructure, Facebook, YouTube.

1. Introduction

Communication plays a pivotal role in transforming any country for its global recognition. It is crucial in rural parts of any country that is often unintentionally sidelined from mainstream development. The social divide in geographical bifurcation as urban and rural areas talks about the uneven distribution of various amenities and benefits according to population density. Delay in appropriate information dissemination regarding different Government policies and their deployment hampers the rate of progress of rural parts of the country. Equipping rural populations with appropriate communication tools helps it in social, economic, intellectual, technological, ecological, and financial upliftment by fetching it to the mainstream that reassures the balanced growth of any country. At present social media is such a medium that shoulders instant and massive information propagation and updates among the urban but rural population. The spread of technological update's locus is urban areas that require similar efforts for rural areas. Instant information updates can conquer the asymmetry between urban and rural environments.

More than half of the world's population (3.9 billion) is considered to be online, and another offline half population is considered to be having the spread in the developing countries (Henry, n.d.) and likely to reside in the rural areas which hold applicable in the context of rural India too.

"The Fourth Industrial Revolution (4IR) heralds an exponential pace of technological change, building on the digital revolution to combine technologies, spawn new ones, and transform systems, industries, countries - even society itself." (Lele, 2017). This occurrence of the industrial revolution led the way for mass communication. The most frequent mass media platforms are the Internet, television, radio, telephone, magazine, and newspaper. Population relies on mass media for contextual information regarding politics, economics, society, ecosystem, finance etcetera that helps understand different perspectives brought forth and appraised in terms of effectiveness. Out of these different mediums, the Internet has revolutionized mass communication in various ways with social media/ networks.

Social Media

"Social media is an ingredient, not an entree."

- Jay Baer

Social media is nothing but applications and websites that enable users to participate in social networking via creating and sharing content. Influential social media/

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networks accessible via the Internet such as Facebook, YouTube, Twitter, WhatsApp, Skype, Instagram, LinkedIn, Google Plus, Pinterest, Snapchat etcetera, channel socia and professional individual life more effectively at large scale.

Worldwide social networks' users' statistics of January 2019 depicts exciting scenarios in the user base context. In 2018, there are 3.14 billion social network users worldwide who are projected to reach 4.41 billion by 2025 ("Number of social network users worldwide", 2019).



There are majorly 2.271 billion Facebook users trailed by 1.5 billion for YouTube, 900 million for WhatsApp, and 111 million for Google Plus. The total worldwide population is 7.7 billion, and 44 percent of them are considered to be using social media actively ("List of Social Media Statistics", 2018). Worldwide, Internet users are 4.021 billion which is up 7 percent year-onyear, worldwide mobile phone users are 5.135 billion, which is up 4 percent year-on-year, and worldwide social media users are 3.196 billion, which is up 13 percent year-on-year (Kemp, 2018).

Rural India

"The true India is to be found not in its few cities, but in its seven hundred thousand villages. If the villages perish, India will perish too." -M.K. Gandhi.

Growth of India is possible via small villages' inclusion into mainstream India with persisting digital connectivity. There are various reasons for lower digital connectivity for India's rural population. Still, generation-z (20-29 years of age group) predominately uses the Internet in India's urban and rural parts.

Internet Users: Region Wise Age Disrtibution



Next-generation services like healthtech, edutech, agritech, fintech etcetera are deemed to be the real face of social networks on the top of digital entertainment and social communication which are dominantly used by the current younger rural population. At present financial transactions are being availed by 16 percent rural and 44 percent urban Indian populations effectively. Internet usage will soon be mandatory for these services as India is not eluded from the global digitization wave (Pandey, 2018). There is massive scope for the Internet spread across rural Indian populations to be appropriately utilized for 'generation-next' services. Social networks promote instant mass-scale information updates resulting in upgraded individuals and systems with discounted time, efforts, and expenses for all.

2. Literature Review

The digital divide in geographic and demographic bifurcation is a crucial element for social media usage in rural parts of the world. Digital divide discusses regionbased facility access to end-user primarily for instruments and networks (Rouse, n.d.). The secondary issue of the digital divide is imparting training to improve skillset for optimum utilization of facilities available in instruments irrespective of region and gender, and drawing maximum benefits from different usage purposes (Henry, n.d.). This paper discusses the primary cause of social media usage in rural India.

'Gram Panchayat Offices' or 'Community Network Centres' equipped with social network facilities at the rural level play a vital role in meeting the socio-economic aspirations of rural populations in India for global connectivity. Social media's impact has been mitigated by multiple factors preventing rural populations from garnering the benefits of the latest information updates from social media sites. Lack of awareness about the social media. lack of access facilities such as mobile/cellphone, linguistic barriers in using the social media and/or Internet, lack of local language use in messages, nonavailability of online information about Government policies and initiatives, lack of motivation to use information over the Internet (Rao S., 2004) are the reasons for lower social media penetration in rural areas. Lack of uninterrupted power/energy supply, nonavailability of hardware such as mobile instruments and telecom network for Internet connectivity, illiteracy, and poverty in rural India are the crucial challenges for several development organizations (Rao S. S., 2002) to provide with appropriate infrastructure facilities in rural India.

Social media is spreading across generations and diffusing across nations (Emmanuel, 2015). Some successful community initiatives in different countries that have been started a few years back are reaping the benefit of social connectivity in rural areas at present and reaching a large number of people (Rao, 2004).

The critical challenge of rural development in agriculture has been endowed with many opportunities to the farmers, and this has eased the process of selling the crop online, eliminating mediators. An example of the Sangli district's turmeric farmers has been well-appreciated activity across the country for connecting with farmers of other districts using Facebook ('Turmeric Farmers' Association of India') to discuss and decide prices for the crop. Farmers had come up with the idea of embargoing the local auction for getting better prices for their crops (Bansal, 2015; Gupta et al. 2013).

In addition to local ventures, global digital connectivity programs help in looking for solutions for local problems and developing a global market place for the local products. 'Knowledge Management' for rural areas in Japan for a dispersed population among different Islands is possible because of social innovation via Facebook (Onitsuka, 2019). The perceived benefits of Facebook use among non-users in rural Zambia are well discussed and documented by Wyche to promote awareness (Wyche, 2016). Other Facebook initiatives such as 'National Ecological Producers Association (APNE)' in Peru, 'Global Forum for Rural Advisory Services (GFRAS)', Mkulima Young (Young Farmer) in Kenya (Barau et al. 2017) are being effectively used for farmer's connectivity with rest of the world.

'Esoko' from Africa is a mobile application that has evolved in agricultural contents alongside ground deployment services for any agri-business needs. It provides opportunities for services such as marketing, procurement, mobile money operations, statistical services, and farmer clubs (Henry, n.d.). An added effort, 'FarmNet' in the USA is a world-leading application for farmers. It is working for small modern farmers in the food and pharmaceutical industries. 'PEOPlink' in the USA provides global level access to artisans from remote global locations through the Internet ("International Trade Centre", n.d.).

A small number of initiatives such as 'GrameenPhone' in Bangla-Desh, Farming First, IFADTV (International Fund for Agricultural Development), Farm Radio International, CGIAR (Consultative Group for International Agricultural Research) a research program on Climate Change Agriculture and Food Security (CCAFS) on youtube have achieved a global reach. Twitter account for other initiatives such as AgChat, AgricultureProud, Young Farmers in Kenya, USDA (US Department of Agriculture), INGENAES (Integrating gender, nutrition and agricultural extension), eXtension4U, MEAS (Modernizing Extension and Advisory Services), GFRAS (Global Forum for Rural Advisory Services) help in uninterrupted connectivity for immediate information propagation and sharing.

Some of the blogs like 'Gate to Plate Blog' by Michele Payn-Knoper - the USA, Website Farmingselfie, Ecoagriculturist (Oluwabunmi Ajilore) - Nigeria, The Unconventional Farmer (Gil Carandang and Patrick Gentry), AGRF Blog (African Green Revolution Forum) - Africa, Agricultural entrepreneurship (Penn State Extension), TNAU Agritech Portal blog (Tamil Nadu Agricultural University)- India also share experiences, insights and information updates pertinent to rural areas (Saravanan et al. n.d.; Barau et al. 2017).

Many diverse areas are still left behind due to the lack of connectivity and accessibility for either being and/or getting connected locally and globally and instill the digital divide (Henry, n.d.). There is also a difference between Web 1.0 websites and Web 2.0 social media. The utilization of news or information from the website is affirmatively coupled with higher trust, whereas information obtained on social media is linked with lower trust (Ceron, 2015) and needs cautious endurance.

3. Research Methodology

Research design is exploratory research relying on secondary data's foundation to evaluate the study's objectives critically. Literature from Government dossiers presented at question-answer sessions in parliament, census records, Government white papers, global / national institute reports, and statistical portals are the fundamental sources of information for the study. Other information sources are the research articles /papers from various repute journals and different web sites for literature review.

4. Research Objectives

- a) To study the current scenario of social media penetration in rural India.
- b) To study the probable reasons for social media penetration in rural India.
- c) To study the initiatives taken by Government authorities of India and/or private entities for rural transformation through social media.

5. Data Analysis

To fulfill the research objectives of evaluating social media penetration in rural India and its people-centric reasons, and system-specific initiatives by facilitators such as Government and/or private entities are analyzed and indited further in detail.

5.1 Current Scenario for Social Media Penetration in Rural India

Indian population is 1.2 billion (1,210,854,977). Rural population of India is 0.833 billion (833,748,852) residing in 597,608 inhabited and 43,324 in uninhibited villages. Urban population is 0.377 billion (377,106,125) residing in 7,933 towns. Urban population density is 3,685 persons per square km spread over in 102,252.00 square km against rural population density of 279 persons per square km spread in 3,101,473.97 square km resulting in an average population density of 382 persons per square km spread in 3,263,725 square km in total ("Census India", 2011)

It was estimated that in the year 2019, there would be 337 million urban Internet users as compared to 290 million rural Internet users as compared to 295 million urban verses 186 million rural users in 2017 ("Number of internet users in India by region)", 2019). Vol. 22, 1 & 2, Jan.-Dec. 2020

Number of Internet Users in India by Region (in Millions)



Figure – 3 (Source: statista.com/statistics number of internet users in India by region)

Rural India has shown remarkable double-digit growth for the adoption of Internet usage year on year compared to urban India (6-7 percent). The contributing factor for this is India had gone to the Mobile age before the Internet caught on and so in India's case it was 'Pre-internet era' then 'Mobile era' instead of 'Pre Internet era' then 'Internet era' leading towards 'Mobile era' as in the case of most of the developed countries. It is a challenge for rural India to speed up internet adoption faster with availability, affordability, relevance, and readiness.

Internet Users: Gender Distribution



Figure – 4 (Source - sannams4.com /digital and social media landscape in India)

The above statistics show that there is a wide gap to be filled for rural female internet users. ("Internet users in urban and rural India in 2019, by gender", 2019).



There will be around 258.27 million social network users in India in 2019 and are predicted to reach nearly 370.77 million in India by 2022 (Sharma et al. 2018).

Payment methods show an uprising trend in India in the favor of digital payment using a debit-card/credit-card/ online-banking/M-wallet against the 'cash-on-delivery' for the projected estimates for 2020.



Prefered Payment Methods

Figure – 6 (Source: Statista.com /statistics/ prefered digital payment methods in India)

In rural India, digital consumption shows an exciting trend of social networking with 49 percent next to online communication with 56 percent. Entertainment stood uniquely at 58 percent of the population surveyed by Gupta K., whereas for the urban population, social networking stood out with 70 percent. Online communication is the top activity with 86 percent of users, followed by entertainment with 85 percent of the population surveyed.

Millions of active social media users in India access social networks through their cellphones. Smartphones, as a direct access device, are considered the digital doorway for users' digital services and contents. India's popular social networks are 'YouTube', 'Facebook', and 'WhatsApp'. Major Internet and social media users are millennials and/or Generation-Z and few catching up from the older generations.

The 3G network has reached 70 percent of the population, but it has reached only 29 percent worldwide rural population in 2016 (Henry, n.d.). On a similar ground with only 18 percent Internet penetration, rural India is lagging in connectivity owing to confrontation in the deployment of fixed broadband networks, but wireless networks will drive Internet adoption for nearly 750 million new users in India as compared to 59 percent internet penetration by India's urban population (Gupta, 2018)

5.2 Reasons for social media penetration in rural India

Social media usage still faces many issues and challenges in India's rural landscape. To synchronize with the rest of the world it is essential to accelerate rural growth, with a developmental focus on rural infrastructure with appropriate communication links.

Non-usage of the Internet in rural India is dominated by 'Low awareness of benefits' with 80 percent of consensus followed by 'No need for the Internet' with an accord of 23 percent respondents. Technical inability or efficacy comes at last with 'PC illiteracy' of 1 percent ("Not using internet among non-users in rural India", 2019).

Not Using Internet among non users in Rural India in 2016, by reasons





These user-centric reasons for not using the Internet among the Indian rural users can be upgraded by systemspecific factors such as Internet spread, technological awareness, network, and instrument affordability etcetera. Technical infrastructure such as devices or instruments, telecom networks, and supportive infrastructure such as power, illiteracy, poverty eradication programs, problems with deployment is not being handled appropriately in rural parts of India hindering the acceptability of technological upgrades and their use among rural populations of India, and are elucidated further as follows.

Technical Infrastructure:

The functioning of the 'Telecommunications industry' is divided into availability and appropriate utilization of medium like electromagnetic wave spectrum, telecom infrastructure, user-end instruments/equipment such as Mobile/Cell-phones, and service providers.

Electromagnetic wave spectrum works in the range of 3 kHz to 300 GHz ("How Cell-phone Radiation Works", n.d.) for cellphone which requires judicious regulation by the Government and use by different service providers.



Electromagnetic Wave Spectrum

Figure - 8 (Source: how stuff works/ how cell phone radiation works)

In rural areas, teledensity was 56.87 percent, by 2017, whereas in urban areas, it was 173.72 percent (adkoli, 2019). VoLTE (Voice-over-Long-Term- Evolution) technology will be used by 60 percent of all broadband subscribers that would be surpassing five billion subscribers globally by 2023. (Privanka, 2018). There is a requirement for additional infrastructure to efficiently share this proportionate augmented load for better services in India's rural parts.

"Increasing penetration of Internet and smartphones will propel the digital payment industry to grow to \$500 billion by 2020 in India" (Yogendra, 2016). Smartphones with various features would steer in a new wave of mobile services in the country. Mobile services, such as financial transactions are becoming the new norm of life for most internet users. Mobile wallets with the ease of use and convenience will see an upward trend. User-end technical devices such as mobile/cell-phone fail to penetrate the rural population due to a lack of technological awareness and affordability.

High infrastructure cost, low returns, regulatory uncertainties from Government, deployment, and lower growth opportunities deter firms/ Service-providers/ development-organizations from venturing into rural areas.

Supportive Infrastructure:

Supportive infrastructure can be categorized in power/ energy generation and distribution, illiteracy, poverty, and problems with deployment of various initiatives and are expounded as follows.

Power: In India, 178 million people were eluded from electricity access in 2017. India is ranked at 80th position among 137 economies in terms of reliability of electricity supply according to the '2018 Global Competitiveness Report' by 'World Bank Group' in the year 2018 ("Power Sector Distortions Cost India Billions", 2018). India has a per capita electricity consumption rate of 805 KWh in 2014 which is far below than rest of the developed countries ("Electric power consumption (kWh per capita) - India", 2014). There is a non-uniform distribution of electricity in rural India as wealthier states are being lighted and able to provide most of the villages with power while less prosperous states are still struggling.

> Share of villages with electricity in rural areas



with electricity in rural areas across India)

Approximately 90 percent of India's villages would be electrified by 2019 ("Share of villages with electricity in rural areas", n.d.). Many villages are still partly lit for the day, affecting social media accessibility drastically for charging instruments and network functions.

Illiteracy: The literacy rate in India is 74 percent for age seven and above based on calculation from census 2011 data (State of Literacy, n.d.). That excludes 26 percent of the population from using the Internet. The majority of the illiterate population lives in rural India. With the availability of many mobile features, the illiterate rural population cannot exploit various features of mobile or web sites and update themselves.

The use of the English language for sharing information via social media is limited in semi-urban and rural areas, and people read, write and converse mostly in regional languages. They struggle to benefit from access, 105 million mobile data subscribers, and 17 million homes with broadband connections are correlated with the number of English users. It is estimated that the regional language internet user base is expected to grow 536 million by 2021 ("Indian Languages -Defining India's Internet", 2017).





There are approximately 125 million proficient English individuals, leaving 1.1+ billion Indians with very little access. Rural users are not generally interested in providing local language content for the masses and optimizing the contents' reach.

Relying mostly on traditional ways rural population develops apprehensions for new ways of life by attitude and defies being tech-savvy, which creates hurdles in upgrading the rural population to technological affinity. This technology challenged attitude is why the rural population is not aware of the benefits of using mobile and the Internet for their working life. 'Information Technology' changes very fast and keeping up with the rate of changes in a vast pool of technological updates is not possible for an average rural Indian. The younger population from rural India, which is more technology-savvy migrates to urban India, abandoning technology-challenged populations to be left with old ways.

Poverty: "Creating information-rich societies is a key element of poverty reduction and sustainable development" (Rao, 2002). The Tendulkar committee report for poverty estimation in India 2011-12 shows 25.7 percent rural population is below the poverty line against 13.7 percent urban population. National poverty lines (in Rs per capita per month) for the years 2011-12 is Rs. 1000/- for urban population and Rs. 816/- for the rural population (Joyita, 2013). People 'Below Poverty Line' cannot afford smartphone devices, and/or the necessary internet data plan. Keeping up with fastchanging required hardware setup for the rural Indian population is a challenge, so mobile is used for conversation as voice calls are very cheap, and incoming calls are free. The majority rural population is voiceconnected but chooses not to be data-connected with better and/or costlier equipment.

Deployment: Telecom infrastructure deployment faces system generic or technical and society specific or social impediments for various reasons.

The cost of equipment such as smartphones is nonaffordable to many rural users. Many companies provide hardware with fast-changing versions, and even the younger population does not exploit all phone features. The solution rests with the affordability of relevant products such as mobile with integrated services and interaction models.

Wired/wireless networks such as broadband and fiber optics are different means of connectivity. Given India's gigantic geographic spread, deployment of the required technical setup of networks is time, effort, and costconsuming activity. The 'Telecom Regulatory Authority of India' has defined broadband services as those provided with a minimum data rate of 256 kbps. Broadband for rural India should cover various aspects such as affordability, coverage, system gain, cost of towers etcetera ("Connecting Rural India with Broadband Wireless", n.d.).

Banking and logistics infrastructure are non-trivial and required to be rejuvenated as it plays a crucial role in ecommerce in rural areas.

5.3 Initiatives by Government and private entities for rural transformation through social media

In India, social network user penetration is 35.44 percent in the year 2018 and is expected to reach 67.40 percent by 2025 ("Social network user penetration in India", 2019).



By looking at the future demand, expansion of existing infrastructure, and creation of the new one in rural India is the bulls' eyes for many contemporary facilitators to make India frontier in global competition and are conferred as follows:

"Telecom is redefining mobility, work, governance etcetera and will promote geographical, financial and social inclusion and enable the interplay of technologies and industries for exponential growth propelling India towards a \$5 trillion economy," (Krishna, 2018).

Mobile data usage per month in India has risen from 39 petabytes by 2016 to 4178 petabytes by 2018. Mobile network capabilities for latency, traffic volume, data rates and need for reliable connectivity can be fulfilled with 5G ("Enabling 5G in India", 2019). India is considered to be having the lowest call rates in the world supplemented by affordable data access.

In 2016 - 17, 'Airtel' has deployed 180,000 mobile sites across India, one of the largest mobile network rollouts globally and is on the way to 1.2 trillion by 2022. In India, Airtel offers 2G, 3G, and 4G wireless services, alongside mobile commerce, high-speed home broadband, DTH (Direct-To-Home), fixed-line services, enterprise services including national & international long distance services to carriers ("Airtel Builds a Future Ready Network", 2017). 4G technology can be contentedly upgraded to 5G in the future.

A standard for wireless communication for mobile devices and data terminals, LTE increases the capacity and speed using a different radio interface and core network improvements. LTE, LTE-A (Long-Term-Evolution-Advanced), LTE-A Pro, and 5G (5th-Generation) will make wireless Internet commercially more viable due to decreasing cost per bit (Ians, 2018).

'The Government of India' initiative **'BharatNet'** is the program to connect India's rural offices or 'Gram Panchayats' via fiber optic cables to provide broadband connections to rural areas. A wireless setup using LTE-A over TV white space propagates TV UHF (Ultra High Frequency) band for rural connectivity (Prasad et al. 2016).

'Telecom Regulatory Authority of India' has come out with the rollout plan of 5G for India and set up a 5G high-level forum in 2017 which has come up with the report "making India 5G ready" for spectrum policy, education, and awareness promotion program, regulation policy, development and application layer standards, application and use cases labs, major trials and technology demonstrations and participation in international standards etcetera. ("Enabling 5G in India", 2019).

5G technology will adopt a layered approach due to the extensive variation in requirements from superfast downloads to small data requirements for 'IoT' (Internet of Thing). 5G will provide all-pervading access to low & high data rate services with fewer issues like call drops and lack of coverage. 5G key performance indicators are data rate, latency, connected devices, capacity, energy consumption, reliability, mobility, cost, and service creation time (Bega at el. 2017). 5G will include a colossal number of different applications and contain many different data types ("5G Mobile Wireless Technology", n.d.). 5G is expected to be rolled out in India by 2021. In this way, 5G will unleash new business opportunities, freeway for the digitization of industries, and create new services and ecosystems (Jayadevan et al. n.d.).

India has shown an affinity towards using necessary technical infrastructure for the betterment of farmers via the implementation of the mobile-based application "Mobile Vaani" to reach the remote areas of Bihar and Madhyapradesh. It is used to discuss wide-ranging issues on Facebook too ("How Mobile Vaani Works", n.d.). It is the most comprehensive network providing the best 4G internet services cost-effectively to help farmers. 'GappaGoshti' of Indian origin is an 'Augmented Reality' program in regional language and has been designed based on the principles of 'Human-Computer Interaction (HCI)' for rural population eliminating the need for text messages and is setting an exemplar for human-computer interaction (Gore et al. 2012). 'Avaaz Otalo', a voicebased social media is an interactive voice forum/ application for small formers in rural Gujarat, India, to ask questions and browse others' responses on a range of agricultural topics (Patel et al. 2010).

MyGov is a social media platform for addressing various issues/grievances by enabling greater people participation in matters relating to public policy. Indian Council for Agriculture Research (ICAR) based institute 'Krishi Vigyan Kendra, Namakkal (India)' and 'Vivasayam Karkkalam (Let us Learn Agriculture) - India', are other well-reputed programs spreading its' wing among Indian rural farmers with the help of Facebook. Free basics, Digi Gaon are initiatives for free limited connectivity to the millions of rural Indians by the Indian Government. Facebook, Google, and Microsoft provide India's railway station with the Internet via free wi-fi.

Power: Thermal power is the "largest" source of power in India with an installed capacity of 371.977 GW at present. The rural landscape is conducive to the growth and use of renewable energy sources such as solar energy, geothermal energy, wind energy, biomass energy, hydro energy, etcetera (Winkler, 2018). The new renewable energy target for India is 175 GW. India's key energy objectives for electricity sustainability are increasing energy security, reducing energy poverty, and improving energy sustainability (Bansal R., n.d.). 81 million households and 74 million rural people do not have access to electricity (Manju et al. 2017).

MNRE (Ministry of New and Renewable Energy) encourages renewable energy production. JNNSM (Jawahar Nehru National Solar Mission) supports a 'three-phase plan' to provide solar energy to India's rural parts. MNRE has sanctioned solar parks, 25 in number with a capacity of 500 MW each for energy production. This development will be reassessed for the extension with a target of 100,000 MW by the end of 2022. The government has come with the 'Electricity Act of 2003' and 'National Electricity Policy of 2005' intending to generate, distribute and transmit power from renewable sources and supply it to rural parts of India (Manju et al. 2017).

Illiteracy: An overarching program known as 'Samagra Shiksha' Abhiyan is for school education extending from pre-school to higher secondary, The Government of India has launched an Integrated Scheme for school education and is effective from 2018-19. It aims to ensure inclusive and equitable quality education at all school education levels. Education can be imparted via means of access to knowledge enrichment for theory and practicals through social media such as youtube, webinars etcetera. This fortification will improve the quality of education for the rural population. Other schemes of education are 'Sarva Shiksha Abhiyan' (SSA), 'Rashtriya Madhyamik Shiksha Abhiyan' (RMSA), and 'Teacher Education' (TE) for the betterment of the quality of education.

Poverty reduction: Increasing opportunity, enhancing empowerment, and improving security are considered to be three primary priority areas according to 'The World Development Report 2000/01' for reducing poverty (Cecchinia, 2003).

Social networks can reduce poverty by improving the underprivilege's know-how of access to an assortment of opportunities in the areas such as education, health, financial services, and Government initiatives, etcetera. There are various poverty reduction schemes by the 'Government of India' such as the 'Integrated Rural Development Program' (IRDP), 'Jawahar Gram Samridhi Yojana' (JGSY), 'Pradhan Mantri Gramin Awaas Yojana'. Term credit is advanced by financial institutions (commercial banks, cooperatives, and regional rural banks) and assistance in the form of subsidy is provided by the Government.

6. Discussion and Result

Our study is resolutely embedded in an exploratory framework drawing on social media penetration in rural India. Considering the current scenario in rural India, a few conclusions can be drawn. First, the 'mobile era' shows up a plethora of opportunities to overcome the hurdles of reach-ability to rural user base as internet accessibility and/or connectivity via mobile is more comfortable and cheaper than the computer and thus affordable to the rural population. The derivative of double-digit growth of internet usage year on year for rural users exhibits the penchant for the digital mode of activities in rural areas with inclination to use the Internet for 'entertainment' purposes. This purpose will help identify a pattern to develop this source by different facilitators. Tertiary reason being rural female user base could be the next preferred target for internet service providers as it has shown an increasing trend of preference for the use. Finally, the preferred mode of payment shows that digital payment has started to dissipate in our culture slowly and people will prefer to use it dissolutely in the future.

An observation in trends lends multiple reasons for lower social media penetration in rural India. The primary reason being high trade-off and regulatory uncertainties deter firms from growing in rural areas. The secondary rationale for rising inclination in using social media by rural populations should suffice additional infrastructure for services and service providers. Triad explanation is restricted or non-availability of electricity in rural areas affects social media accessibility drastically for charging instruments and network functions. Oblong visage in the sequence is the majority illiterate population lives in rural India and prefers regional language contents. Social media has made illiteracy a thought for the obsolete generation, and voice search on the Internet has made it convenient to access information with more comfort than old days of legacy systems. However, the hurdle still lies with the readability of written matter. Pentad reason in the progression is that rural users prefer traditional ways of living and develop apprehensions for new ways of life for mobile, Internet, and social media. Finally, the underlying principle due to poverty is that mobile/cell phones are used for voice calls but data connection and cost of equipment such as smartphones are non-affordable to many rural users.

The government initiatives at the outset, in the field of 'Electronics and Broadcasting' for LTE, 5G, and wireless internet communication rollout encompasses various benefits such as real-time access with incredible speed and cost-effectiveness owing to the spread of expenditure across the spectrum that can accommodate very many different data types. Roll out of ubiquitous 5G technology due to available infrastructure can prove to be a success. The derivative of newer technology benefits from optimum utilization of spectrum, lower latency, capacity for the enormous number of applications, and a higher probability of digitizing industries etcetera. Tertiary explanation, impediment free digital village, free basics, and express wi-fi initiatives by the Government giving a morale boost up for developmental efforts.

Pentad ground for social media platforms like 'MyGov' enables more extensive people participation in matters relating to public policy. Hexad justification for Humancomputer-interaction via voice response system like 'Mobile Vanni' is used to confer extensive-ranging issues on information sharing about Government schemes, local updates, announcements etcetera those are being faced by rural people and discussed on Facebook. Sept rationale in the progression is Government initiatives for power and energy talks about creation, development, and optimum utilization of various renewable energy resources for augmented load with laudable projected targets. To finish with, there are various noteworthy schemes and programs for increasing literacy and reducing poverty by the Government. The integration of human and system efforts will blossom new paradigms for new ecosystems with ample employment opportunities and information access.

7. Implications

This study poses scholarly contributions to rural users and the Government. The conjecture is to enhance the accessibility and quality of information dissipation to endusers via social networks It advances our understanding of user-centric and Government-specific futuristic approach.

User-centric approach: Social media penetration in India is going through steady growth, and rural India should reap its benefit by updating self and/or influencing the population with the awareness of relevant information updates such as schemes, subsidies etcetera. Speedy and accurate information saves time, effort and expense, resulting in smooth functioning and ease of operation for rural users. The literacy rate is improving in rural areas because social network accessibility is easier and contents appeal to individuals' prejudice and make it fun via indirect learning.

Government-specific futuristic approach: The repercussion of this study is that policymaking should be corroborative to the development of rural India to fetch it to the mainstream. The government has taken ample initiatives to build appropriate networks like LTE and 5G for better connectivity to make it future-ready for technology adoption by users.

8. Conclusion and Future Studies

The study provides preliminary support to understand the current scenario for social media penetration in rural areas for the Internet and mobile era. It studied various aspects of population proclivity for Internet usage for region, gender and payment preferences. It narrowed down the study by understanding the reasons and use of social networks by different users. The study also scrutinized reasons for up-grading technical and supportive infrastructure with a kinship for frequent technological changes and discusses various initiatives taken by the Government of India.

The amalgamation of people, society, and systems can result in rural India's upliftment. This blend can be further explored with the help of research with various promising directions that could significantly extend our theoretical understanding and practical ability to increase social media usage in rural India. Efforts need to be made to understand the technology like LTE and 5G in detail to better rural populations for appropriate deployment to overcome connectivity drawbacks, improving service quality and better technical functionality etcetera for social media usage. Derived social media's negative consequences on users' psychological health could be other areas to be explored further. Finally, Different policy matters & Government actions for hauling rural India to the pinnacle of development can be investigated further.

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Human resource management challenges in the tourism industry

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Abstract

Tourism has both direct and indirect effects on a country's economy, job creation, and growth. Governments all around the world are working to grow this business and invest resources in order to attract visitors. Even while tourism helps to the growth of the country's economy, it is not without its obstacles. Aside from the aforementioned problems, this business is experiencing a severe scarcity of competent labour. The purpose of this research is to investigate the numerous human resource management difficulties confronting the tourist business. It concludes that long working hours, non-standardized HR practices, a lack of a professional approach, vision, and a clear career path, insecure and long-term employment, growth opportunities, learning and development, and a poor work-life balance are some of the challenges that the tourism sector faces in terms of human resource management. It suggests that employers, the government, educational institutions, and training institutes should all work on these challenges to develop skilled labour for the industry. Owners and owners managers should be trained to operate the business efficiently and create favorable working circumstances.

Introduction

The tourism industry is well known for its contribution to the country's economy. It generates both direct and indirect opportunities, resulting in large-scale job creation. Countries such as Switzerland, Thailand, Mauritius, and Indonesia rely heavily on tourism revenue. Governments around the world are attempting to develop this industry and investing resources in order to attract tourists. Tourism is regarded as a developing industry in several countries, including Malaysia, Thailand, Egypt, Spain, and Greece, due to its significant contribution to foreign exchange earnings and job opportunities (Khan et al., 2013). Tourism is a significant contributor to economic growth, personal income, savings and investments, and commercial activities in these countries. Foreign exchange profits from tourism may be used to import capital, which can then be utilized to manufacture products and services locally, resulting in economic growth (McKinnon, 1964) and an improvement in the balance of payments (Oh, 2005). Tourism is one of the industries which can be termed sustainable. Sustainable tourism development fulfills the needs of present-day tourists and host communities, as well as protects and expands any future opportunities (David, 2011).

Factors affecting tourism¹

A variety of things influence how the tourism sector runs. Some have an instant effect, while others have a longterm effect. Immediate impact is seen from the money earned by transport companies, hotel guides, local vendors, etc. It may create indirect employment such as handicraft sellers, people making items for the hotels, laundry, etc.

Environment at Destination

When a destination has a favourable climate, tourism flourishes. In contrast, any unfavorable environmental changes, such as high winds, flash floods, drought, and extreme weather, can harm tourism.

People in India, for example, prefer to visit colder temperature places such as hill stations during the summer months.

The economy of the country

When a country is experiencing economic turmoil and individuals are suffering unemployment difficulties, tourism suffers. On the other hand, tourism grows when a country's economy is doing well, and people can afford to spend money on leisure.

¹https://www.tutorialspoint.com/tourism_management/tourism_management_factors_affecting.htm accessed on 25th May 2021

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Historical or Cultural Importance of Destination

The location or destination of travel has a significant impact on the tourist industry. If the site has significant historical or cultural significance, visitors would undoubtedly want to visit there to see monuments, castles, forts, old architecture, sculptures, caverns, antic paintings and utensils, clothing, weapons, jewelry, and other related treasures. The Archeological Survey of India maintains historical forts, several of which are now popular tourist sites. Similarly, several palaces have been converted into luxury hotels in order to give tourists a royal experience.

Exploration opportunities

Some tourists travel to areas for research and discovery. The need for research promotes tourism. Archeologists, geologists, oceanographers, biologists and zoologists, architects, and anyone studying arts and cultures are looking for significant sites in their field of study. The Ajanta-Ellora caves in India provide researchers with an example of how these caverns were carved and decorated thousands of years ago.

Religious Importance of Destination

Tourists are continually thronging to locations of religious significance or worship. Tourism is at its height in specific locations at certain times of the year. Tourists frequently travel to Mecca, Bethlehem, Tirupati Balaji, and Kashi to achieve inner peace, seek the blessings of the deities they adore, and wash their sins before death.

Technology

The Internet has reached virtually every corner of the globe. Tourists are benefiting from the Internet. Tourists attempt to acquire a sense of the locations they will visit, the level of amenities and services, and the attractions at the destination while arranging a tour. After visiting a place, experienced travelers offer their thoughts on different Internet forums. Portals like Skiplagged, RocketMiles, WanderU, Booking are a few of them.

Importance of Human resource management in the tourism industry

For any industry to progress, human resources are pretty significant. If the employees are skilled, satisfied, and have a long tenure in the same company, they would serve the customer better. In the tourism industry, customers' preferences change pretty often, repeat customers are a good source of revenue, and word of mouth works quite rampantly while referring to a destination or a hotel. Therefore, effective human resource management will lead to efficient human resources, bringing a significant change in the business. The following figure depicts the impact of effective HRM on business.



Figure 1: Impact of HRM on tourism business

Characteristics of the tourism industry in terms of Human Resource Management.

Tourism needs human capital greatly and offers a wide range of jobs in a number of different types and sizes (Szivas, Riley & Airey 2003). Characteristics of the tourist industry, such as high labour availability, absorption, and mobility, may be particularly welcome during the economic transition (Szivas et al., 1999). Shaikh and Syed (2013) found that there are no competent people in the tourism industry. They further elaborated that most people joining the industry are ordinary graduates who do not have a specific diploma or degree in tourism.

It is observed that the people working in the tourism industry need more detailed education, motivational programs, skill development with unique productivity and which relates to salaries and working hours. As today in India tourism sector comprises mainly of small and medium-sized enterprises the HR practices are not standardized, lack professional approach, vision, clear career path, secured and long term employment, growth opportunities, learning, development, and quality of the work-life and working environment is resulting into employee dissatisfaction and its directly affect to the result from tourists dissatisfaction. Therefore, the management of human resources in tourism is characterized as "adhocism" (Baum & Kokkranikal, 2005).

Challenges faced by the tourism industry

Even though tourism contributes to the upliftment of the country's economy, this industry is not free from challenges. Apart from the other challenges, this industry is facing an acute shortage of skilled workforce. A significant part of the challenge in HRM is due to the nature of the industry.

Therefore the significant HR issues related to the tourism industry are as follows:

Lack of management skills with promoters: Many tourism-related enterprises employ less than ten individuals. As a result, management systems tend to develop. Furthermore, owner-managers lack financial and human resource management abilities, which harms the viability of small tourism firms. As a result, owners cannot offer compelling career opportunities to ambitious personnel (Beech et al., 2006).

Unattractive salaries: According to Choy (1995), salaries in tourism employment are lower, and jobs are low-skilled and demeaning, with long working hours, non-standardized HR practices, a lack of a professional approach, vision, and a clear career path, unsecure and long-term employment, growth opportunities, learning, and development, and a poor work-life balance. In India, the tourism industry's salaries are comparatively far less than the salaries paid by the other industries like IT, call centers, retail, banking, insurance, finance, telecom, real estate, etc.

Shortage of workforce: Qualified individuals are in short supply in the tourism industry. There is a significant supplydemand imbalance in the labour market. Due to cultural and other considerations, HR practitioners in this area have trouble hiring top talent (Rahaman, 2013). There are quite a few educational institutions that provide training in this sector, due to which the gap between demand and supply of workforce is increasing. **Non-conducive working environment:** Working conditions in the tourism business are frequently deplorable. The majority of these businesses require their employees to work excessive hours, do not provide job security, and lack training (Beech et al., 2006). Compared to their counterparts, people working in the tourism industry get fewer service benefits (Chand, 2016).

High employee dissatisfaction and attrition: As previously stated, qualified individuals are not readily available to work in the tourism industry. Moreover, the attrition rate is high, which means only a small group of permanent employees are available (Hjalager, 1996, 2007; Hjalager & Andersen, 1998). In such a case, simple graduates or people with lower qualifications may enter the industry. This, in turn, creates a situation in which employees either leave the industry due to dissatisfaction or are terminated due to poor performance. Long working hours, a hostile work environment, and a low pay scale contribute to job dissatisfaction. Moreover, youth employed in the sector consider their service positions as stepping stones in their career paths (Chand 2016), which means they will join some other industry/ organization after gaining some experience.

Lack of opportunities for career advancement: Several employees in the tourism industry believe they have fewer prospects for advancement. Many of them complain that their abilities are underutilized. Purcell and Quinn (1995) discovered that graduates complained about having limited opportunities to build their managerial abilities in their survey of 704 international tourism students. According to surveys conducted by Kusluvan and Kusluvan (2000) and Barron and Maxwell in Turkey (2001), people have an unfavorable opinion of working in the tourism business.

Societal aspects: A job in the hospitality business is not regarded as highly in nations such as Bangladesh. When it comes to careers in the hospitality business, most people think of tourist guides and cooks/chefs (Huda et al., 2012).

Suggestions for attracting talented people to the tourism industry

Despite the HRM issues that the tourist industry has, it continues to be a vital contributor to the global and national economies. As a result, several recommendations are made to improve human resource management in tourism.

Standardized HR practices: According to the literature, most businesses in this sector employ fewer than ten

people; hence they do not feel the need for standardized HR processes. Standardized HR procedures across the business, such as entrance norms, salary, leaves, working hours, working conditions, etc., will help recruit more individuals to the industry.

Management development for owners and ownermanagers: Owner-managers of small tourism firms frequently lack financial and human resource management abilities, which harms the business. To boost the performance of this sector, these managers should be trained in various management functions regularly. Industry groups and training organizations should take action to address this problem.

Increase in the number of educational institutes: Many persons who enter the tourism sector do not have the necessary skills. They either self-learn or are trained by their companies. This wastes both the employees' and the employers' time. Second, it shortens the time it takes the person to become productive. Employees that are new and untrained also make mistakes, which result in losses. As a result, there is a greater need to establish and expand the number of educational institutions that generate trained labour for the tourism industry. This will also help to reduce the demand-supply gap in this business.

Conclusion

The preceding explanation suggests that the tourist industry plays a significant role in the growth of the global and local economies. Human resources are crucial for the sector's long-term success. Long working hours, nonstandardized HR practices, a lack of a professional approach, vision, and a clear career path, insecure and long-term employment, growth opportunities, learning and development, and a poor work-life balance are some of the challenges that the tourism sector faces in terms of human resource management. Employers, the government, educational institutions, and training institutes should all work on these challenges to develop skilled labour for the industry. Owners and owners' managers should be trained to operate the business efficiently and create favorable working circumstances.

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Women Entrepreneurship Development Through MSMEs in India

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Abstract

Women Entrepreneurship is one of the crucial issues in any developing nation. Micro, Small and Medium Enterprises (MSMEs) is an essential means for women entrepreneurship to evolve and get recognition in the market. The purpose of the paper is to document existing policies and programmes of Government, institutional networks and the involvement of supporting organizations in promoting women entrepreneurship. The study highlighted women ownership's current status in Indian MSME's and suggested some strategies for empowering women. This paper is based on secondary data, and the information collected is from journals, related books, articles, newspaper articles and government reports.

Keywords: entrepreneurs, women entrepreneurship, MSME, development.

Introduction

Over the last few decades, Micro, Small and Medium Enterprises (MSMEs) sector in India has emerged as a progressive and productive sector. It is also helping people to get employment and become an entrepreneur. MSMEs play an essential role in employing a massive scale. They are distributed evenly over urban and rural areas, leading to rural areas' industrial development. MSMEs also reduce regional imbalances (Suresh and Haneesh, 2014). MSMEs are working as ancillary units to large industries and improve their efficiency by providing them with subsidiary products. This sector also contributes immensely to the socio-economic development of the country. They are producing various products and services and meet the domestic and international markets' requirements.

Like any other sector, this field is also incomplete without women's participation. In India, women entrepreneurs' contribution cannot be ignored mostly in rural areas where they generated income and employment instead of so many challenges they face in their personal and professional life. More and more women see prospects in entrepreneurship and entering into different business areas of their interest. Economic and social development is necessary for women from urban India and who belongs to rural areas as it leads to the nation's overall economic development.

Women entrepreneurship is how women initiate a business, gather all resources, undertake risks, face

challenges, provide employment to others, and manage the business independently. The Government of India defines women entrepreneurs as "An enterprise owned and controlled by a woman having a minimum financial interest of 51 per cent of the capital and giving at least 51 per cent of the employment generated by the enterprise to women" (Ahirwar, 2020).

Review of literature

In his review, Greene *et al.* (2003) evaluated women entrepreneurship on various parameters like gender discrimination, personality, social perspective, and financial challenges with women once they decide to start a business of their own.

Malyadri, G. (2014) highlighted the role of women entrepreneurs in economic growth through formation of capital, employment generation, increase in per capita income, balanced growth of the rural and urban region and contribution in improvement in living standard.

Sharma *et al.* (2012) investigated micro-entrepreneurship development and Self-Help Groups (SHGs) on women empowerment. The micro-entrepreneurship is strengthening the women empowerment and remove gender inequalities. Self Help groups also get involved in the community's development through microcredit mechanism. Microcredit helps women-run small business by gr anting them small loans as their principal goal is to empower women to earn.

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Lathwal (2011) in her study, found that support of the family members provided to women is one of the most important reasons behind any successful business.

Kumbhar, V. (2013) listed some critical issues related to women entrepreneurship. Some of those significant issues are inability to find work-life balance, lesser financial freedom, lack of sufficient property and ownership, lack of skill and confidence, hesitation to work with male workers, less risk-bearing capacity, and lack of awareness to their assistance programs.

Finance: a significant roadblock to women entrepreneurship

It is difficult for women entrepreneurs to start and run a business if compared to men because of the age-old perspective of society which has always been very conservative. Even our financial institution is very cautious in funding and extending support to women entrepreneurs as they consider it risky to extend credit to women who want to start up their own business. There is a lack of reliability on the caliber and confidence of women. For the risk assessment, a female applicant was generally asked for a male guarantor. (Khaitan, 2019).

Initiatives by Government to promote women entrepreneurship through MSME

The Ministry of MSME believes in inclusive development of all and has taken various initiatives and measures to ensure that demographically and geographically weaker sections could be benefited from its work. Many institutions conduct Entrepreneurship Development Programmes to address women entrepreneurs' needs who have potential and support them in possible ways. These institutions include State Small Industries Development Corporations (SSIDCs), Micro, Small & Medium Enterprises Development Organization (MSME-DO), the Nationalized banks and even NGOs. There is also a women cell in the Office of DC (MSME) to provide assistance and proper direction to women entrepreneurs facing problems related to their start-up and (Ilahi, 2018).

MSME ministry chose to empower women to boost gender equality in our country. Since the inception of the Prime Minister's Employment Generation Programme (PMEGP) Scheme, women entrepreneurs have started as many as 1.38 lakh projects up till 23.01.2019 (Singh, 2020). Women entrepreneurs have a share of about 30% of total projects which is set up under this program. One of the 12 critical announcements made by Prime Minister in the support and outreach programme for MSMEs on 2nd Nov.; 2018 for strengthening MSME sector is that Central Public Sector Undertaking (CPSUs) units to make mandatory procurement of 3% from women entrepreneurs out of 25% mandatory procurement. Total procurement till 2nd Nov.; 2018 was Rs. 10.15 crore from 187 Women-owned MSMEs. According to the MSME Annual Report 2018-19, total procurement has increased to Rs. 123.41 Crore from 792 Women-owned MSEs till 31.3.2019. The procurement from women entrepreneurs' amount to 0.64% of MSMEs' total procurement.

Stand-Up India

Government of India launched Stand-Up India on 5 April; 2016 with a vision to support entrepreneurship among women in India and SC & ST communities. Standup India scheme is only four years old, under which every branch of scheduled commercial banks provides bank loans to a minimum of one scheduled caste or scheduled tribe and a one-woman borrower. The loan provided can be between Rs 1 lakh to Rs 1 crore. One of the subsidy schemes under Stand up India for women at the central level is Skill up-gradation and quality improvement and Mahila Coir Yojana which aims at women empowerment through the provision of spinning equipment at subsidized rate after appropriate skill development programmes. According to the ministry's statement, as many as 17,155 accounts belonged to women. At the same time under Standup India scheme, Rs. 16712.71 crore has been sanctioned to women entrepreneurs (Financial Express, 2020).

Prime Minister Mudra Yojna (PMMY)

Under PMMY, which is launched in April 2015, 70 per cent of total loan is extended to women. This makes more than Rs 15.75 crore out of over Rs 22.53 crore loans sanctioned till January 31; 2020 (Financial Express, 2020). Under this scheme, mudra loans (up to Rs 10 lakh) is extended by commercial and other banks to non-farm and non-corporate enterprises (Financial Express, 2020).

Other Schemes:

- 1. Mudra Yojana Scheme
- 2. TREAD (Trade-Related Entrepreneurship Assistance and Development) Scheme
- 3. Annapurna Scheme

- 4. Stree Shakti Package for Women Entrepreneurs
- 5. Bhartiya Mahila Business Bank Loan
- 6. Dena Shakti Scheme
- 7. Cent Kalyani Scheme
- 8. Udyogini Scheme
- 9. Mahila Udhyam Nidhi (SIDBI)
- 10. Mahila Vikas Nidhi (SIDBI)

When it comes to promoting women entrepreneurship, e-commerce giants like Amazon and Flipkart have extended their support to boost small traders' business through their platform. Claimed to promote the traders on this platform. The company claimed that it saw record participation from thousands micro, small and medium enterprises (MSMEs) and women entrepreneurs during its Amazon Small Business Day shopping promotion (Amazon, 2020). In July 2019, Flipkart had launched its new programme called Flipkart Samarth which has intentions to bring India's artisans, weavers and handicrafts producers onto their e-commerce platform. The Samarth programme provides dedicated support services for the following procedures of business:

- a. onboarding,
- b. cataloguing,
- c. account management,

- d. business insights
- e. warehousing support

Flipkart is also working together with NGOs and government bodies to promote and encourage rural entrepreneurs, focusing on women-led enterprises, artisans and weavers. Flipkart claims to have around 1 lakh MSME sellers on its platform.

Critical Results of NSS 73rd Round Survey (2015-16) regarding the participation of Women Entrepreneurs in MSME

According to the NSS (National Sample Survey), 73rd Round, approximately 1,23,90,523 women enterprises come under the category of MSMEs. Females have an average share of 20% in the ownership of the MSMEs in rural and urban areas. The following tables highlight the existing situation of women entrepreneurs in the country.

Ownership of Enterprises under Male/ Female Category

Percentage of proprietary MSMEs enterprises is 95.98 out of a total, predominantly owned by male owners (79.63%) against female owners (20.37%). This pattern was almost similar in urban and rural areas, although a slightly higher percentage of male-owned enterprises was found in urban areas (81.58%) than rural areas (77.76%).

Sector	Male	Female	All
Rural	77.76	22.24	100
Urban	81.58	18.42	100
All	79.63	20.37	100

 Table: 3 Percentage distribution of Enterprises in rural and urban areas under male/ female ownership category wise

Source: MSME Annual Report 2019-20

Distribution of Enterprises by Male/Female owners

In small and medium enterprises, male dominance in ownership was higher (95%) than micro-enterprises

(80%) whereas females are lagging far behind. Only 2.67% of females own medium enterprises, showing that females are more limited to micro-enterprises.

Table: 4 Percentage	distribution of	of Enterprises	by male/ t	female owners	hip
			~		P

Category	Male	Female	All
Micro	79.56	20.44	100
Small	94.74	5.26	100
Medium	97.33	2.67	100

Source: MSME Annual Report 2019-20

Women Entrepreneurs Beneficiaries under PMEGP

Under PMEGP, a higher subsidy is provided to women beneficiaries. A total of 1,62,383 projects had been

assisted to women entrepreneur since the commencement of PMEGP (i.e. 2008-09 to 31.12.2019).

Year	2015-16	2016-17	2017-18	2018-19	2019-20	Total (Up to 31-12-2019)
Beneficiaries	11356	14768	15669	25399	12529	162383

Table 5: Women beneficiaries under PMEGP during last 5 years

Source: MSME Annual Report 2019-20

Employment Creation

MSME has also allowed women to be its part if not owners. It created jobs in urban and rural areas for

females, thereby helping them earn some livelihood and live a respectable life. There are 1109.89 lakh employees in MSME sector which extended jobs to 264.92 lakh females.

Sector	Female	Male	Total	Share (%)
Rural	137.50	360.15	497.78	45
Urban	127.42	484.54	612.10	55
Total	264.92	844.69	1109.89	100

Source: MSME Annual Report 2019-20

Conclusion

This paper has highlighted the government and other organization's schemes to promote women entrepreneurship with the help of limited data. Participation of women as entrepreneurs in MSMEs in India is still not satisfactory both in rural and urban areas. We also came to know about obstacles in women's lives through literature reviews. Women entrepreneurs have shown immense potential to add value to the Indian economy by entering the MSME sector, but lack of guidance, improper infrastructure, insufficient finance, social outlook make their ways difficult. Gender issue should be addressed with much more information on it. and special programmes and practices could be implemented so that women intending to start a business may never face problems which comes from within our society. The launch of various schemes and measures has helped women spark their talent and build their identity, but such attempts should be continuous with lots of vocational training, skill development programme, counselling, awareness programme and felicitation.

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A Study on Consumer Awareness, Perception and Preference towards Fortified Foods in Anand City

Rina Dave*

Abstract

The trends currently have changed majorly and have become very health-centric. People who love eating food do not prefer just any kind of food but want that the food should be tasty, and at the same time, it should be healthy. They look at the food's nutrients and then decide whether they would prefer to consume the product. The market has shown immense growth over the years. The market share of the product range to demand has also shown significant growth. People preferred health food, but most were not aware of the term "FORTIFIED FOOD". They consumed fortified food but did not know what it is referred to. So one of the major reasons for choosing this topic as our research project is to study the awareness and create awareness amongst the people. "FORTIFIED FOOD SEGMENT" has various categories under it, such as infant food, cereals and cereal products, dairy products, beverages and fatty acid and oil. Once the awareness is tested, knowing the consumer's preference and perception are necessary. The change in trend and consumer demand and choice changed as they wanted various tastes and demanded various products that companies did incorporate.

Keywords: fortified food, preference, perception, nutrition

Introduction

The trends currently have changed majorly and have become very health-centric. People who love eating food do not prefer just any kind of food but want that the food should be tasty, and at the same time, it should be healthy. They look at the food's nutrients and then decide whether they would prefer to consume the product. The market has shown immense growth over the years. The market share of the product range to demand has also shown significant growth. People preferred health food, but the majority were not aware of the term "FORTIFIED FOOD". They consumed fortified food but did not know what it is referred to. So one of the major reasons for choosing this topic as our research project is to study the awareness and create awareness amongst the people. "FORTIFIED FOOD SEGMENT" has various categories under it, such as infant food, cereals and cereal products, dairy products, beverages and fatty acid and oil. Once the awareness is tested, knowing the consumers' preference and perception are necessary. The change in trend and consumer demand and choice changed as they wanted various tastes and demanded various products that companies did incorporate.

As defined by the World Health Organization (WHO) and the Food and Agricultural Organization of the United

Nations (FAO), fortification means essential nutrients are purposefully added in food, i.e. improving food's nutritional value with minimal health risk. Fortification may be a commercial choice to show that the product has extra nutrients in the food, and by providing these nutrients to a diet will help gain the deficient nutrients in a body that a consumer could not get in their daily or routine food.

There are six categories under the food fortification segment: infant food, milk and milk products, fast and oil, etc. The consumers' daily consumption has increased because of the traditional breakfast and cereal-based foods; the consumer now prefers fortified cereal and cereal products such as cornflakes, cereal-based biscuits, oats, etc. Knowing the market of fortified products knowing the consumer's perspective is also necessary. The main objective is to know the public's awareness, perception of consumers' consumers, and preference towards Fortified Foods.

Literature Review

FSANZ (2013) commissioned a population survey of Australians and New Zealanders aged 16 years and over to understand their awareness, attitudes and behaviour towards food fortification. The study revealed that they

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are well aware of voluntary fortification. More than 75 per cent of Australians and New Zealanders were aware that foods sometimes contain vitamins or minerals that the manufacturer has added. Simultaneously, only 34.2 per cent of New Zealanders and 24.0 per cent of Australians were aware of compulsory fortification in bread. When prompted, bread was required to contain a particular vitamin(s) or mineral(s). 31.5 per cent of Australians showed that it was confirmed that bread must contain folic acid. More New Zealanders thought it was confirmed that iodized salt was mandatory in bread than Australians. However, none of them was more likely to respond than men. Despite Australia being the only country with mandatory folic acid fortification, more New Zealanders than Australians were aware of the purpose of folic acid fortification. Over half of Australians and New citizens of Zealand said that their preferred to buying food with added vitamins or minerals.

Roy & Mehta (2012) The TATA group survey says that India's H&W food industry has witnessed significant activity over the past few years. They define H&W products in three segments better for you, fortified/ functional and natural. The market increased by 7 to 8% compared to the packaged food market. Many factors affect to consume fortified foods like urbanization, lifestyle, rising in income and growing health consciousness. Fruit juices, breakfast cereals, curd/yoghurt, nutritional biscuits and packaged/flavoured milk could be volume drivers in functional foods. Consumption of fortified food cereal and cereal products decrease the level of diseases. Also, fortified foods focused on the general nutritional needs of growing children. This research shows that substitute good like energy drinks and sugar substitute are continually increasing. The cereal and cereal products have a significant share (70%).

Jarvis and Magarinos (2003). Huo et al. (2015) said in China, voluntarily iron-fortified soy sauce was essential and had been effective in reducing the prevalence of anaemia since its approval in 2002 and its expansion during ten years of public education, social marketing, and infrastructure development in cooperation with the Global Alliance for Improved Nutrition.

Eichle et al. (2019) included 24 RCT (often multi MN fortification) with 30 pair-wise comparisons from lowand middle-income countries. A minimal and nonsignificant increase of haemoglobin values emerged (0.09 g/dl [95%-CI: -0.01 to 0.18]; 13 RCT with iron fortification; deficient quality evidence). No significant difference was found on anaemia risk (risk ratio 0.87 [95%-CI: 0.76 to 1.01]; 12 RCT; poor quality), but a significant difference in iron deficiency anaemia favouring fortified food was found (risk ratio 0.38 [95%-CI: 0.18 to 0.81]; 5 RCT; inferior quality). Similar effects were seen for fortified dairy products and cereals and different fortification strategies (mono- vs dual- vs multi-MN). Follow-up periods were often short, and anthropometric measures' impact was weak (low quality of evidence). Deficient quality of evidence emerged for the improvement of cognitive performance, functional measures and morbidity.

Bromage et al. (2019) revealed that only 19% of rural and 30% of urban Mongolians and 48% of Harbin residents were aware that industrial fortification is practised in their countries. For most food groups evaluated, at least half of Mongolians and less than half of Harbin residents thought fortification was governmentmandated (only the addition of iodine with salt is mandated in both countries). Fifty-five per cent of rural and urban Mongolians favored mandatory fortification of foods, 14% disapproved of it, and 31% were uncertain (compared with 25%, 38%, and 37% respectively in Harbin). Upon learning that the primary purpose of adding vitamin D to milk is to prevent rickets, 75% of Mongolians but only 18% of Harbin residents favoured mandatory fortification, while 42% of Harbin residents favoured voluntary fortification (compared with <10% of Mongolians).

According to food industry executives, in the Covid 19 situation, consumers were already interested in functionality before the COVID-19 pandemic. However, because of the pandemic, 31% of consumers take more supplements, and 29% consume more functional foods/ beverages.

Food Fortification in India

India's health and Wellness sector is valued at over Rs 10,000 Crore (as of 2015).

Milk food beverages contribute to nearly half of the health products category with sales of Rs 5,180 crore, followed by healthy oils and multigrain atta at Rs 1,250 crore and Rs 1,205 crore each.

Companies charge between 22% to 82% premium for healthier variants for labels like 'all-natural' and 'high in fibre' products. The fortified food product range in India:

- Cereals and cereal-based products Milk and Milk products
- Fats and oils Accessory food items
- Tea and other beverages Infant formulas

Cargill India Pvt led FF packaged food with a 19% value share in 2015.

Its brands of Gemini, Sweekar and Nature Fresh have prime positioning due to the essential vitamins A, D and E, and fortified oils.

Other competitors :

- Usher Agro
- Pepsi Co
- Saffola
- TATA
- Britannia

The people's awareness is tested by knowing whether they know the term food fortification or not and whether they are aware of just the products. Once they were aware, we had to know their perception, that they consumed it or not and why they consumed it. The research is conducted in Anand, and our major focus is the age group of 18 years to 27 years.

Objectives of the Study

Primary Objective

To study Consumer's Awareness about the term Fortified Foods and find out their Perceptions towards it.

- To know the Preference of the Consumers towards Fortified Foods.
- To know the degree of consumption of Fortified Foods.
- To know Fortified Foods' perception in Different Consumers Mind, i.e. Demographic Segment (Gender).

Scope of the Study

• The Scope of the Study is only limited to one city, i.e. Anand.

Limitations of the Study

• Reaching a different segment of respondents was quite difficult.

• It was not easy to convince respondents to fill the form as it was quite long and jargon-heavy.

- Sample Size: 50
- > Type of Questionnaire: Structured questionnaire.
- Sampling Method: Non-Probability Convenience Sampling.
- > Location: Anand City Only
- 1) Primary data were collected by the investigator himself/ herself for a specific purpose.
- 2) Secondary data were collected by someone else for some other purpose (but being utilized by the investigator for another purpose).



Figure1: Awareness of the term Food Fortification

In the survey, only 40% of them know about the term "Food Fortification", whereas 60% of the surveyed are not aware. As the research's primary objective is to find food fortification awareness, this question helped us find how many people know about the term. I can interpret that the respondents have been consuming Fortified Products but were not aware of the same classification. The products were considered healthy due to the added nutrients in them. The products were famous and were consumed because of their Brand Names. This question helped ME to find the degree of awareness of the term Food Fortification.

Section A

Awareness regarding brands:

- a) Saffola Oats
- b) Kellogg's-Corn Flakes
- c) Britannia Nutri Choice Biscuits
- d) Kellogg's Special K
- e) any other product



Figure 2: Awareness Regarding Brands

Out of the respondents not aware of the term Food Fortification, 30% of the respondents are aware of the Kellogg's corn flakes, followed by 21% of the Respondents are aware of the saffola oasts as well as Britannia nutria choice biscuits. Moreover, 8% of the respondents were about any other products. From the above data, it can be interpreted that the major respondents are not aware of the term Food Fortification but are aware of the Fortified Food Products. It can also

be concluded that these have gained familiarity among the respondents because of their Nutritional Value and not because of the Food Fortification concept. The question gives clarity on the awareness about the concept of Food Fortification.

Frequency of consumption of Fortified Foods in the past six months

a) Yes b) No



Figure 3: Frequency of Consumption of Fortified Foods in the Past Six Months

The respondents who are not aware of the term Food Fortification, 43% consumed fortified products in the past six months, and 57% have not. We took the scale of 6 months as we wanted to gauge the current consumption in our research. We can infer from the above question that the respondents who do not know about the term Food Fortification are aware of the Fortified Products and have consumed them in the last six months.

Section **B**

Sources of information about Fortified Foods

- a) Friends b) Television
- c) Nutritionists d) Internet
- e) Newspapers and Magazine



Figure 4: Sources of Information about Fortified Foods

From the table given, we can see that the respondents rated Internet and Television mediums as a significant role in the awareness of the Fortified Products, i.e. 39% and 38% of the respondents, respectively. A point to notice here is that Newspapers as a medium is rated very low in awareness. Only 10% of the respondents answered Newspaper as the medium of awareness. We can interpret that Fortified Products' awareness is mainly done through the Internet's medium from the above data. It

has helped the consumers know about the fortified products well, followed by Television. Word of mouth also plays a useful role in awareness. Ironically, Newspapers have comparatively less hand. Even the nutritionists and the experts influence the awareness of food products.

Frequency of consumption Fortified Foods

a) Once in a day b) Once in a week c) Once in 15 days

d) Once in a month e) Never



Figure 5: Fortified Products' consumption Pattern

The above table shows the Fortified Products' consumption pattern amongst the consumers. Out of the total respondents who are aware of the term Food Fortification and have consumed the same in the last 6, majority of the respondents ?consumption pattern of the Fortified Products is Not Fixed i.e. 32% of the respondents never consume it. From this, we can interpret the Fortified Products' consumption pattern amongst the respondents. This question is to check the preference of

consumers for Fortified Products. By asking the frequency of consumption, we can say that they prefer the fortified product over non-fortified products if they frequently buy them. Here, most consumers have stated that their consumption time is not fixed but usually goes for weekly consumption.

Consumer perception for fortifies food

a) Yes b) Not Sure c) No

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Figure 6: Consumption of Fortified Food for Health

Out of 20 respondents, 50 % of them were not sure that consuming fortified foods helps them stay healthy, 31% perceived that consuming Fortified Foods will help them stay healthy, and 19 % believed that there are no benefits of consuming fortified foods.

From the above data, it can be interpreted that the major respondents who are aware of the term Food Fortification were not sure that the fortified food would help them stay healthy and fit the reason behind this may be that they may be aware of the term and products but never consumed or experienced the effects of the fortified food, followed by most of them we sure that it does help which indicates that they might consume the fortified food and did see the results, fewer responses favored with no as they might not believe in the fact.

Benefits of fortifies food

- a) Weight Loss
- b) Healthy Life
- c) Adding More Nutritional Value
- d) Medical Treatment



Figure 7: Benefits of fortified food

The research's secondary objective was to determine the consumers' fortified foods' perception, and this question helps us identify what a consumer thinks about the benefits of fortified foods. 21% responses favoured that it helps to lose weight, 52% of responses favoured that it helps to stay healthy, and 49% thought it adds more Nutrition Value. From this we can interpret that as per the consumer they consume the products for a healthy life or for adding

more nutritional value as the main purpose of fortified food is to add value in the product which however leads to healthy life followed by losing weight loss as the products like k special are in the market which promotes weight loss by consuming it.

Monthly spending on fortified food

a)?100	b)?200	c)?300	d) ?400 or above
/	,)	



Figure 7: Monthly spending

More consumers were ready to pay ?200 on fortified products from the above diagram, followed by 33% of them limiting their spending up to 100? 17 % and 10 % wanted to limit their spending up to ?300 and ?400 or above respectively. ?200 is a nominal price for any product in the health market; hence, 40 % favoured spending ?200, followed by 33% favoured spending ?100. Less percentage of them wanted to spend ?300, ?400 or above, as more of them might have limited purchasing power, leading them to spend ?200 or less for fortified products.

OVERALL INFERENCE

Following are points that are highlighted from the Questionnaire Analysis:

- a. The consumers were aware of fortified products and consumed, but they were not aware of the term "Food Fortification". Only 40% of the respondents were aware of the term Food Fortification.
- b. The main source of their awareness was the internet and television.
- c. Their consumption pattern was not fixed they either consumed it weekly or once in a month.
- d. Out of all the Consumers, half of them were not sure that consuming fortified foods led to healthy and fit lives.
- e. Consumers think that Fortified products lead to a healthy lifestyle and adds more vitamins and nutrition.

Recommendations

One of the major problems encountered in the research is the awareness of the Fortified Cereals and Cereal Products. However, the consumption for the same is not an issue. People are consuming these products to stay healthy but are not aware of Food Fortification. Recommendations for the same are as follows:

Strong emphasis on the term Food Fortification while promoting its products

Food fortification is a term that many people are not known, so people are not aware of the products that the company provides and are not consuming them.

People who consume these products are not aware of the term food fortification. The company should emphasize the term food fortification in their marketing strategies.

Acknowledge the consumers with all the benefits of consuming Fortified Food

The company does not advertise much on the contents and the benefits of the product but focuses more on flavours. If the company starts focusing on the contents, i.e. the proteins and vitamins, and the benefits that the food provides, people will prefer fortified food. From the research conducted, it is clearly stated that Taste plays more importance than Quality.

Hence, here consumers should be acknowledged with the benefits over taste.

Products with strong brand names should be the major medium of promoting the concept.

Products with strong brand names have higher consumer involvement and greater brand loyalty which makes the consumer buy their products if the company promotes the benefits of the product and promotes the term fortified food, which will increase the awareness amongst the people.

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Managing Rural Economy: Government Initiatives and Stakeholders

Vaishali Shah*

Abstract

Schooling infrastructural facilities rural area of Vadodara district

Schools are a very important part of anyone's life. Moulding of a human comes through schooling. It promotes higherorder thinking. It's an informally formal structure to make us progress in life. It forms a strong foundation for human, moral, ethical, cultural values. It leaves its indelible mark on young minds.

Education infrastructure means suitable places for the learning process. It is one of the most basic amenities. Learning can take place in a variety of places like places of worship, tents, under trees, temporary shelters, homes, etc., but most people would want formal education to take place in structured classrooms which have basic amenities ensuring safety and comfort.1

Poor or no infrastructure deters students from attending school. It acts as a barrier to enrolment and participation. Infrastructural issues affect students in rural and densely populated urban areas, especially for the economically weaker sections of society.

A study on educational initiatives taken by the **Government of Gujarat**

Education paves the way for development. It impacts all aspects of human life and society. Women empowerment, child development, cleanliness, civic values all stems from learning.

It fuels a tremendous boost in economic growth and development. Education improves the quality of life and opens doors for progress.²

Excellent educational infrastructure is one of the most basic amenities of human society. Structured learning takes place with groups of children. As such, learning can occur in any type of setting: shades of trees, open spaces, places of worship, tents, temporary shelters, homes, verandasit is expected that formal education takes place in safe and comfortable classrooms.

Over the years, there has been a rapid change in the ways of life. With a higher number of people getting educated, their standard of living too improved. This, in turn, acted as an influencer, inspiring more and more people to get educated. The supply has to match with the ever-growing demand.

India has a large number of school-going kids due to the ever-increasing population. Hence, the country requires a robust educational infrastructure to accommodate all its young forces and provide them with quality teachers.

Education can accelerate economic growth. Investment in educational facilities is a crucial indicator to enhance and improve the quality of education.³

An adequate school infrastructure would include wellventilated spacious classrooms, electricity and internet connectivity, playgrounds, separate sanitary facilities for boys and girls and staff members, ramp facilities for specially-abled children, clean drinking water, to name a few.4

There are various benefits of better-quality infrastructural facilities. Infrastructure facilitates instruction, improves student-faculty interaction, augments students' attendance. Well ventilated, clean, and spacious facilities ensure hygiene and health of the occupants and enhance cognizance.5

 $⁽https://educateachild.org/explore/barriers-to-education/infrastructure \#:\sim:text=Education \% 20 infrastructure \% 20 includes \% 20\% 20 suitable \% 20 spaces, where the state of the state$ place%20with%20groups%20of%20children.) accessed on Mar 17, 2021

⁽https://plan.rajasthan.gov.in/content/dam/planning-portal/planning-dpt/plan/annual-plans/chapters/year%202016-17/930082016120237.pdf, n.d.) 3. (Kumar.N, 2008; Kumar.N, 2008)

^{4.} (https://educateachild.org/, n.d.)

^{5.} (Teixeria..J, October 2017)

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Gujarat State comprised 26 districts, sub-divided into 225 talukas, having 17,843 inhabited villages and 348 towns per the 2011 population census. Gujarat state accounts for 6.19% of the country's total area, with an area of 1.96 lakh sq. km. At present, the state comprises 33 districts and 249 talukas.⁶

The Right to Education Act has been implemented in the state. Children studying in standard 1 to those studying in standard five are considered to be in the primary section. The children studying in standards 6-7-8 are grouped under the upper primary section. Grade 8 has been brought under the primary section since June 2010.

Std 9 & 10 fall under secondary education, and Std 11 & Std 12 under higher secondary education. There are quite a few private institutions in the education sector. However, private players are shy of setting up educational facilities in rural areas because of the lack of people's ability to pay. It is also challenging to get well-qualified teachers in rural areas for private schools.

Hence, the gap for the requirement of education facilities has to be borne by Government.

This paper attempts to study the various initiatives and schemes undertaken by the Government of Gujarat for the Education sector. All data related to various schemes, number of beneficiaries, total expenditure is taken from the Socio-Economic Reports prepared by the finance department of the Government of Gujarat.

Primary Education: The number of education institutions imparting primary education in the state in 2012-13 were 42,477, 43,176 in 2013-14, 43,638 in 2014-15, 44,018 in 2015-16, 44,545 in 2016-17, 45,055 in 2017-18, 45,135 in 2018-19 and same in 2019-20.

The number of pupils enrolled in these schools was 91.76 lakh in 2012-13, 92.29 lakh in 2013-14, 91.42 lakh in 2014-15, 90.67 lakh in 2015-16, 90.12 lakh in 2016-17, 88.57 lakh in 2017-18, 86.75 lakh in the year 2018-19 and 86.14 lakh in 2019-20.

The process of improving retention rate and decreasing the dropout rate for elementary level (Std. I-V) is encouraging in the state. The dropout rate for the elementary section (Std. I-V) has decreased substantially from 22.30 percent in 1999-00 to 1.37 percent in 2019-20. The dropout rate for the standard I to VIII was recorded at 3.39 percent in 2019-20.

Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) were recorded at 102.10 and 99.00, respectively, in the state, in 2019-20 in primary education (Std. I to VIII).

Sarva Shiksha Abhiyan Mission (SSAM) is implemented by the Gujarat Council of Elementary Education (GCEE) in all 33 districts and 4 Municipal Corporations. Kasturba Gandhi Balika Vidyalay (KGBV) Yogana provides residential elementary schooling along with boarding facilities for girls of SC/ST/OBC/Minority and BPL disadvantaged groups in scattered areas in 33 districts and 2 Corporations.

In Gujarat, under KGBV, 239 Residential schools (KGBVs) (164 from GOI and 75 from GOG) have already started. There are 47 Type-I (Std. 6 to 8) KGBVs, 64 Type-II (Std. 6 to 10) KGBVs, 53 Type-III (Std.6 to 12), and 75 Type-IV (Std. 9 to 12) KGBVs. In all these KGBV, a total of 24,000 girls have been enrolled.

Gyankunj Project was launched on 5 September 2017 by the Government of Gujarat. The project is implemented in 5268 government primary schools, and 15173 classrooms have been developed as interactive e-Class rooms with smart boards facility.

'Vidya Deep' is an insurance scheme for accidental deaths except for suicide or natural death of students studying in primary schools. Death by any other means, at any other place during 24 hours of the day. Students studying in primary schools and ashram shalas are covered. The insurance amount is Rs 50,000. The Government of Gujarat pays the entire premium for this scheme.

The table shows the details of premium paid in lakhs by the Government of Gujarat in respective years along with the number of beneficiaries for the scheme Vidya Deep.

^{6.} (https://gujecostat.gujarat.gov.in/key-statistics1, retrieved Mar 22, 2021)

Year	Premium paid (in lakhs)	Beneficiaries
2013-14	181	361
2014-15	*	*
2015-16	205.50	411
2016-17	250	410
2017-18	250	*
2018-19	225	*
2019-20	225	160
2020-21	250 (provision)	71 (till Dec 2020)

Table 1: Year-wise data for Vidya Deep scheme

*Figures not available

Vidya Laxmi Bond has been introduced to encourage the parents to send their girl child to school. The idea is to enable the girl child to receive education, at least up to the primary level. The scheme is introduced in villages and cities where the female literacy rate is less than 35 percent. A bond of Rs.2000 is provided to the girls (who are under B.P.L.) at the time of admission in Std. I, receivable after completion of Std. VIII. A total of 6,75,899 girls have benefitted till 2020-21, as per available data.

Year	Expenditure (Rs. lakh)	No of beneficiaries (girls)
2014-15	2600	115,426
2015-16	2,600	105,293
2016-17	2,600	75,567
2017-18	2,000	100,000
2018-19	1834.36	91,718
2019-20	1900.00	95,000
2020-21	1857.90	92,895
	Total	6,75,899

Table 2: Year-wise expenditure and no of beneficiaries of Vidya Laxmi Bond

Distribution of Cost-free Text Books: This scheme has been in force since the 7th five-year plan. It is implemented in primary schools managed by District Education Committees and Municipal Corporations.

To further reduce the burden of studies on parents for their wards, students get textbooks free of cost during the academic term. In the year 2014-15 provision of Rs. 8820.00 lakh was made. About 4410 lakh sets have been provided to the students.

In the year 2015-16, with a provision of Rs. 8820.00 about 92 lakh sets of books were provided to the students. In the year 2017-18, a provision of Rs. 10,000 lakh was made, and approximately 60.60 lakh students were covered in this scheme. In the year 2018-19, 2019-20, and 2020-21, approximately 60.60 lakh students have been covered with an expenditure of Rs. 7971.45 lakhs, 7933.70 lakh, and 7500.00 lakh in this scheme.

Gunotsav Programme: The State Government has been holding the Gunotsav program since 2009. 'Gun' means marks in the Gujarati language, and it also means values in the Gujarati language.

The Government aims to improve the quality of education, increase the number of enrolments, and retain those who are enrolled. Education is a long-drawn process, and if the child does not find any value addition, chances of dropouts are higher.

All Government officers from all departments and Ministers from the state are deployed to evaluate schools during the Gunotsav Program. Schools, teachers, and students are evaluated.

For 2014-15 the Gunotsav program was conducted during November 2014. During the program, from about 33,624 schools in the state, 15,501 primary schools were evaluated by approximately 5,167 External evaluators, and 18,123 schools were self-evaluated. This program was conducted in January-2016 for the academic year 2015-16. During Gunotsav Program, teachers and students in 32,842 schools were evaluated. In 2016-17, this program was organized from 16 to 18 January 2017 in 34,392 schools. In 2017-18, this program was organized from 6 to 7 April 2018 in 34,227 schools.

Physical facility: Many rural communities in the state lack in physical infrastructure. To attract students to

school and to keep them in, the Government of Gujarat ensured a few basic facilities in schools like drinking water, toilets (separate) for boys and girls, electrification, computer laboratory in government primary schools. The mission was known as Sarva Shiksha Abhiyan.

The table below shows data year-wise in terms of physical facilities and the amount spent for the same.

	Drinking	Boys' toilet	Girls' toilet	Electrification	ramp	Computer	Vidya	Amount
	water					laboratory	Sahayaks	(in lakhs)
2013-14	43,168	41,268	42,430		56,573	20,502	144864	
2014-15	33,749	33,749	33,749			20,502		11816.54
2015-16	43,589	42,642	48,382		37,085	20,502	153,222	35675.70
2016-17	33,749	33,749	33,749	33,749		20,502	154,360	76510.28
2017-18	33,711	33,711	33,711	33,711		20,502	160,829	72,860.00
2018-19	33,644	33,644	33,644	33,644			164,091	
2019-20	33,480	33,480	33,480	33,480				21,847.63

Table 3: Year-wise Expenditure for physical facilities under Sarva Shiksha Abhiyan

* remaining data not available

Mukhyamantrishree Kanya Kelavani Nidhi: The fund has been collected through a public auction of the gifts obtain by the Hon'ble Chief Minister. In addition to this, the fund of donors and institutions have been included. In this way, to date, approximately Rs.89.97 crore has been collected. This fund is used for girls' education. Fifty-five thousand eight hundred seventy-one girls have received a total of 25.84 crore reward/assistance, starting from 2005-06 to November 2014. About Rs.10,000 to Rs.500,000 economic assistance can be provided to each girl beneficiary as per Government rule.

From the year 2017-18, the Mukhyamantri Kanya Kelavani Nidhi is being implemented by the Office of Higher Education, Gandhinagar. The scheme's beneficiaries are (i) students securing 80 or more percentile in 12th standard science stream and getting admission in the first year of MBBS courses and (ii) guardian's annual income should not exceed Rs. 6 lakhs. The maximum limit of the benefit is Rs 4 lakh. During the year 2019-20, 2496 girls' medical education students have assisted Rs 63.15 crore.

Year	No of girls (beneficiary)	Amount (crore)
2016-17	180	4.54
2017-18	1152	23.21
2018-19	1669	36.18
2019-20	2117	52.55

Table 4: Year-wise beneficiary and amount under

Mukhyamantri Yuva Swavalamban Yojana: Under this scheme, to provide equal opportunity to bright and needy students of all classes in acquiring higher education, equitable financial assistance has been given based on merit cum means to the eligible students who are seeking admission in higher education. Under this scheme, 50% tuition fee assistance within the limit of Rs. 2 lakh is admissible. The beneficiaries of the scheme are (i) students securing 80 or more percentile in Std 10th or Std 12th (Science/General stream) and getting admission in the first year of diploma or degree courses and (ii) guardian's annual income should not exceed Rs. 6 lakhs.

Also, students studying in higher education courses are provided tuition fees assistance, equipment-books assistance, and financial support for livelihoods. Under this scheme, during the year 2019-20, a total of 63,217 students has been given total assistance of Rs. 280.31 crore as tuition fees assistance and hostel fees assistance. The budget provision of Rs.255.00 crore and Rs.287.00 crore has been made for the year 2020-21 and 2021-22. **Secondary and Higher Secondary Education:** Secondary and higher secondary education institutions have increased from 10,406 in 2012-13 to 12,445 in 2019-20. The number of students has also increased from 26.01 lakh in 2012-13 to 28.67 lakh in 2019-20. The table below shows a year-wise increase in the number of institutions and number of students.

Year	No. of institutions	No. of students (in lakh)
2012-13	10,406	26.01
2013-14	10,537	27.02
2014-15	10,811	27.32
2015-16	10,940	26.79
2016-17	11,478	26.92
2017-18	11,958	28.10
2018-19	12,234	28.06
2019-20	12,445	28.67

Table 5: Year-wise data	for Secondary	v and Higher S	econdary Institution	is
Table J. Ical-wise uata	Ior Secondar	y and mgner 5	cconuar y mistitution	12

Higher Education: There were 1,857 institutions in the state imparting higher education during the year 2012-13 (Department of School Education and Literacy M. G., 2013-14)⁷ which has increased to 2,504 in 2019-20. The number of students in these institutions has also increased from 12.57 lakh in 2012-13 to 15.27 lakh in

2019-20. The number of girls in these institutions has increased from 3.86 lakh in 2012-13 to 6.77 lakh in 2019-20, whereas the number of teachers in these institutions has increased from 30,272 in 2012-13 to 59,852 in the year 2019-20.

Year	No of institutions	No of students	No of girls	No of teachers
2012-13	1,857	12.57	3.86	30272
2013-14	1921	13.56	5.72	51,048
2014-15	2055	14.42	5.91	52675
2015-16	2084	14.87	6.21	59,163
2016-17	2571	14.57	5.90	51,323
2017-18	2178	14.53	6.25	57,194
2018-19	2390	14.78	6.45	57,529
2019-20	2504	15.27	6.77	59,852

 Table 6: Year-wise data for Higher Educational Institutions

Seasonal Hostel: About 1 lakh families are working in the salt pans in the little desert of Kachchh. They migrate to these places for 6 to 8 months in a year. To prevent their children from missing out on education, the State Government has implemented an Open Seasonal Hostel and schools which accommodate these children. These schools enroll children in the age group of 6 to 10 and are established within 2 kilometers of their residence. Children can continue their education in their respective schools when they return to their villages. Thirty-eight supportive schools were opened in 2012-13, and another 73 supportive schools were opened in the year 2013-14.

School on Wheel is a program launched by the Government of Gujarat, Samagra Shiksha, in 2019-20 to provide education using technology to children of salt pan migrant workers. Total 38 Schools on Wheel function in 4 districts (Kachchh-6, Morbi-2, Patan-10, and Surendranagar-20) of the state for the educational purpose of the children of salt pan workers.

⁽Department of School Education and Literacy M. G., 2013-14)
Approximately 511 children took the benefits of this project in the year 2019-20.

Vocational Education Scheme is an initiative of The Ministry of Human Resource Development (MHRD), Government of India. It is also introduced in secondary and higher secondary schools in Gujarat State. Practical training is imparted to students according to their abilities. This helps to inculcate professional readiness and also to enhance vocational opportunities for students.

In the Gujarat State, 260 government secondary and higher secondary schools have introduced vocational education schemes. For this, 145 vocational trainers are working in the state.

Model School, run by the Samagra Shiksha, Gujarat, are the Schools of Excellence. The Model School scheme aims to provide more capacity and higher quality education in low literacy areas. It is working in educationally backward talukas of 22 districts of Gujarat. Quality education is being provided in Standard 6 until 12.

Science stream students will also be provided coaching for exams like; JEE and NEET. In addition to various competitive exams, these children will also be given guidance for career-oriented exams like; UPSC/GPSC. Twenty-one thousand seven hundred forty-one students have enrolled in the year 2020-21.

From all the above various schemes and initiatives, it can be seen that the Government of Gujarat is dedicated to imparting education to one and all. The Government is taking many steps to bring students to school. Schoolgoing children may be seen as a burden to poor parents. They have to be fed and taken care of. Education is costly for parents with limited resources.

Moreover, as children grow, they can be seen as extra hands, working and earning money. People having less education tend to get lesser wages, and their quality of life remains substandard. Education is a weapon to break the vicious circle of poverty, and every Government has to provide education to its subjects. Government schools provide students with midday meals.

Further measures are free textbooks, financial assistance, scholarships, insurance, hostel facilities -especially for the girl child so that their parents enroll them for schooling. The number of beneficiaries of the programs is increasing year on year. Inspired beneficiaries, in turn, will attract a more excellent number of children to school. Sustained association with the school will make children healthy and happy. The education they gain in the process will help them march confidently, ready to face competition in the new modern world. Tomorrow's youth should be confident, self-reliant, and prepared for the future. Hope the education they receive will turn them into good citizens.

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THE UNIVERSITY CREST



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tree in the Crest is the Historic Mango tree where the founders this seat of learning of started their activity and the rising sun behind the tree represents the light of learning that is being spread by this Rural Centre of Education. The Sanskirt dictum in the form of a crest presents the ideal viz. "Character and conduct are the fruits of learning" - ''शीलवृत्तफलं श्रुतम्'' - that is set before it by the great personality after whom this place and this University are named.