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**ELECTRONIC HEALTH RECORD SYSTEM - BENEFITS AND CHALLENGES: A LITERATURE REVIEW**

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**ABSTRACT**

Health care sector in India is widely under public and private sector. There has been lot of improvement in this area ever since after India gained Independence. Medical treatment, equipment, technology, Information system, rules, regulations and many others areas connected to healthcare have seen a lot of change. In this paper, we would like to bring out the review on literature available with regard to Health Information Systems (HIS). Lot of literature is available in this area in different aspects. The articles were mainly categorized based on the relevant area that were discussed in the article. The wide categories were Articles, which discussed more on benefits, challenges, obstacles during the process of implementation.

**KEYWORDS**

health information systems, electronic medical record, electronic health record.

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**INTRODUCTION**

The Circular on Electronic Health Record by Ministry of Health and Family Welfare says Electronic health records can improve care by enabling functions that paper medical records cannot deliver:

- EHRs can make a patient's health information available when and where it is needed – too often care has to wait because the chart is in one place and needed in another. EHRs enable clinicians secure access to information needed to support high quality and efficient care.
- EHRs can bring a patient's total health information together to support better health care decisions, and more coordinated care.
- EHRs can support better follow-up information for patients – for example, after a clinical visit or hospital stay, instructions and information for the patient can be effortlessly provided and reminders for other follow-up care can be sent easily or even automatically to the patient.
- EHRs can improve patient and provider convenience – patients can have their prescriptions ordered and ready even before they leave the provider's office, and insurance claims can be filed immediately from the provider's office.

**OBJECTIVES OF STUDY**

The objective of the study is to review literature from across the world on Electronic Health Records with respect to its benefits and challenges.

**RESEARCH METHODOLOGY**

More than 200 literature on Electronic Health Records has been reviewed and then about 75 of them critically reviewed. Amongst these about 35 were found to specifically mention about the benefits and challenges faced in implementing EHRs.

**BENEFITS AND CHALLENGES OF USING EHRs**

There are of course many problems faced during the process of using the electronic health record systems (EHRs), but the benefits outweigh them and hence justifying their use. (Cortes et al 2011). Their study showed the benefits were standardization of processes, ease and agility in recovery of information, the control over prescriptions, materials and procedures was better. Also there was better adherence to standards established by the hospitals. Research finds that applications that provide online access to personal records were more beneficial to chronic patients. (Kim & Johnson, 2002). It was also found that patients desired greater integration of medical records (Winkelman et.al, 2005). Patients desired integrated records which could help them to review laboratory results and also the prescription along with the important statistics and a chart history. This included a study on various applications provided by vendors and also understanding the varied platforms and functionalities (klein et.al, 2007).

The direct engagement of patients was a meaningful use of EHRs. The EHRs empower the patients and support care between their visits. The study suggested that there should be payment providers at national level so that it would support all modes of access across various insurers. (Ralston et.al, 2010). EHRs can eliminate tons of paper records and also x-ray films. They could reduce the in-person visits for simpler problems. There could be reduction in paper use, transportation fuel, water consumption and also some toxic chemicals, these could in turn help in reducing the environmental footprint. (Turley et.al, 2011). Burrows & Ashley (2014) in their research found that although there were many benefits of EHRs in comparison to paper records, like paper records would get old, soiled or spoiled with water, termites or fire, but still there was only partial adoption of EHRs. The goal was to have EMRs accessible across the country and for this, there was a great need of interoperability and technical and policy conformance among various networks. It also required change in cultural and behavioral actions on part of providers. The capital required was also huge. In spite of all these obstacles the benefits found in adopting EMRs is huge. The clinicians for acute care spent significant time documenting the patient care information in EHRs. (Peneyer et.al 2014). They found in their study that this was important because the nurses accessed this information more often along with the practitioners because they made continuous decisions for the patient based on these records. These records were continuously updated by the nurses and clinical practitioners. They also found there was limited awareness about the use of components of EHR available to them. The researchers felt there was a need to study further into the effects of streamlining EHR components with its use for clinicians and strategies that would help to improve the end users' experience with the system.

Knowing the large benefits of EHR, there has been adoption of it to quite an extent but interoperability is yet to be achieved and that requires technical and policy conformance among networks. (Burrows, Ashley, 2014). Investments are huge and would take at least three years to get returns and of course, the patients will have to pay for this superior service. Since EHRs are digital records which store complete medical history of patients it is important that there is proper security so

that no can misuse this data. Best practices need to be followed so that medical errors can be reduced, proper and efficient technologies to be implemented so as to provide quality health care to patients and the system more efficient. (Jaymeen Shah et.al 2014). Business value is enhanced when the consequences of implementing EHR result with interplay of technological, organizational and human dimensions. This showed that the way IT is adopted is also very important (Ben-Zion et.al 2014). A passionate and highly committed team can make a lot of difference. Various stakeholders have different levels of expectations, the passion of developers and need and expectation of clients and various levels of resistance are all to be considered. (Craig et.al 2015). Patient safety is very important and EHRs are used continuously for providing treatment also support is taken from software sometimes for decision making in treatment and hence there cannot be any errors in EHRs, making patient safety as most important. (Muhammad Zia et.al 2015). The initial investment on EHRs seem to be very high but then its benefits are large and it leads to savings after some period. (Freyman et.al 2014). Friedman et.al, 2013 found that even in countries where the penetration of EHRs was higher needed practical considerations as only limited success was achieved. It needed support from the population as well as the political support as it is a national effort of the medical institutions.

It was found in a study that private practitioners felt there should be better human technology interaction and hence system developers should take care of this aspect during design and development. It was found that to avoid negative consequences of implementation of EMR sharing, it should be designed with meeting the specific needs, capabilities and limitations of end users and the key aspects it is intended to support (Dr Calvin et.al, 2014).

Arya (2015) found in his study that it was time for information to be fed only once into the system electronically and this should be available at all times during the care. The reports should not have any redundant information in them. Reports should be available as when required by doctors during the care and only the information needed should be available and not the entire information. There should be provision to import the data and format it in a manner as required by the end user. Sunyaev Ali (2014) in his review on literature found four areas in health care systems, first discussed about basic conditions that are essential to make consumer healthcare services attractive for the stakeholders involved. The second was to identify systems, which could supply patients with information and recommendations helping to improve the current situation. The third was represented by devices enabling consumer health care to operate pervasively in a manner that the benefit for the patients is maximised and expenses could be lowered. The fourth stream was maintaining personal health records, which permit the storage, and organizing the personal health records with the help of third parties. This research found high potential for consumer health care services, which provide secure, easy to use services, which supply patients with health information. The records also increase the possibilities of interconnectivity.

Despite the advantages of EMR, the adoption rate is still low; there is less acceptance by the physicians. Parvin et.al (2014) in their study felt that there is a need to accelerate the use of EMRs and for this it needed educational campaigns to demonstrate the advantages of EMRs and further improve the physicians perceptions of EMRs. EMRs can have a positive impact on patient safety, for this, the physicians must be able to use the systems effectively after they are being made available to them. (Callan et.al 2007) It is a common thing that is found in general, resistance to change. Moving on from paper based record system to EHR also faced resistance. The study found that it was important to involve the staff, give them proper training and educate them and support them to practice using it. Lot of investigation has to be done before selecting a vendor and then realistic budget has to be prepared for the entire implementation process. Since the investment is huge, proper funding should be arranged. There should be a proper curriculum framed and courses for students to have a career in Health Information Technology (HIT) (Chi Zang et.al 2014). Well-educated HIT professionals will find employment in this area and they will be required to help the nation grow in healthcare sector.

Kersten Sandra (2013) brought out the importance of information Governance in electronic health record optimization. It was found that Hawaii Pacific Health recognized the value of information as an important resource for quality care. It was found that an information governance program was very critical for maximizing EHR and other information systems to get accurate and actionable data, which would help the organization to achieve much more improved care delivery and also save costs. Engaging various critical owners like the clinical, legal, compliance, IT, finance and others involved would ensure success. Kothapeta et.al (2014) conducted a study on the workforce requirements in hospitals to implement EHRs. They studied the relationship between the size of the hospital and the IT hiring. They found the small size hospitals spent a lot more on IT when compared to the large hospitals. The IT budget and the outsourcing budget was not clear. They felt there should be further study on hospital mergers and the effect on them by comparing IT before merger and after merger. They also felt the need for further study to find the ideal size for all departments including healthcare information technology workforce in hospitals and the need to train and educate the workforce. Latha Anju (2012) in her study found that even though there are benefits of EHR, there were barriers in its successful implementation in India. To list a few being, cost, leadership, vendors, deficits in public policy, keeping up user needs, standard security and true definition. She focused mainly on Integrated Electronic Health Record System research and implementation of it for maintaining a health card. It was found that this would reduce medical errors and provide a link to medical knowledge and decision support system. Various meters such blood pressure meter, pulse oxymeter, glucose oxymeter, can be used which can store the reading electronically which could be transferred to the computer and then to the health card. Chunn Vance (2011) in his study found that despite the advantages of EHRs in the past it was largely driven by practice and physician characteristics. The incentives associated with adopting EHRs were largely internal to the practitioner or organization. The initial costs for software, hardware and training were huge and that apart an incentive was a great booster to adopt EHRs. The adoption and use of EHR seemed to grow longitudinally and there was need to further study about longitudinal growth and interoperability.

Glasgow, Russell et.al (2012) in their study found that there is a need to involve patients in EHRs and also to include patient reported information such as their preferences, health behavior and psychosocial functioning. Patients, practitioners and policy makers should be able to understand the measures and take actions based on them. They found a chief obstacle in this implementation as political will. Standardizing psychosocial items and practical behavior and including them in EHRs can improve human care and enhance patient-provider relationship and hence develop better information for addressing problems in medical care. Ntsako Fikile (2013) in his study showed the need to implement EHRs in state owned hospitals in South Africa as there were no EHR system found and hence further to facilitate e-referral system to improve health care delivery.

Maria Cucciniello (2011) aimed at making an in depth investigation to evaluate the effects of EMRs by comparing the two study settings which implemented the same EMR system produced by the same provider. Key issues arising at these two hospitals were studied. This study offered to practitioners, policy makers a better basis of analysing ICT (Information and Communication). Kathrin M. Cresswell (2012) studied about the consequences faced by users of new technology involving electronic health record. Due to the complex processes involved in implementing and adopting new technology there were changes in organisational functioning and work practices. She took up this study in English health care setting about national implementation of electronic health records and one of the procured systems was Lorenzo. She conceptualised her study in form of case studies. She applied a theoretical framework to explore sociotechnical processes involved in the implementation and adoption of Lorenzo. It was found that most importantly; national implementations need to build on a solid basis of local technology adoption by allocating sufficient time for individual users and organisations to adjust to the complex changes that often accompany such service redesign initiatives.

Viginia, Craig, Mihir and James Courtney (May 2009) in their study examined the physicians' response to the electronic medical records (EMRs). The physical accessibility and the logical feasibility of use of EMRs was studied. They found many a times the physicians did not have the physical access to the EMRs and many a times they had access but felt it is better to spend more time on the patient rather than update the data in EMR. This study found mainly accessibility, be it physical or logical to be the main barriers and had indirect effect on physicians' perceptions of EMR usefulness and ease of use. Urvasi Sharma (2011) included a case study involved in deployment of EHRs in U.S and investigated the challenges facing e-health. The various issues were patient data security, organization support, user-friendly systems; policies to implement are a few amongst them.

## CONCLUSION

It was found from the literature that Electronic health records had many advantages like eliminating paper records, lesser errors in entering information, less time consuming to retrieve patient records, helped in better care delivery, helped patients to retrieve their records, lab test results etc online, reduced cost. There was improved patient-physician interaction online and better understanding resulting in better care delivery. Though there are many advantages, it has its own challenges in implementation and use. Due to high initial investment many health care centers with lesser beds found it difficult to implement, as the return on

investment would take too long when compared to large hospitals. Other challenges were to train the staff, nurses and doctors and encourage them to use electronic record system. It is also a challenge to maintain the security of patient records and not allow any misuse of the available information.

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**OMNICHANNEL RETAILING: IMPACT OF FACEBOOK ON RETAIL BUSINESS DYNAMICS**

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**ABSTRACT**

*Indian Retailing industry came with evolutionary patterns from kirana store retailing to online retailing (i.e.,) Rural to Urban. This scenario was unorganized in the beginning stage and its gradually growing as Omnichannel retailing through Social Media (Facebook). The purpose of this study is to deliver a Smarter Shopping Experience on Social Media especially on Facebook. The Structured Questionnaire has been used to collect from 1045 respondents on the basis of Random Sampling method. The respondents include Engineering Students & Staffs of Madurai. The data has been analysed with the help of Statistical Software (SPSS) and Simple percentage, Descriptive statistics and ANOVA are used for analysing the data. This study offers detailed description and analyses of the Facebook affecting retailer's business dynamics.*

**KEYWORDS**

omnichannel, retailing, social media, online shopping, seamless experience.

**JEL CODE**

O32

**INTRODUCTION**

To compete in the world where consumer expectation to be treated as individual, the retailer must strive to have customers feel as if you know them personally understand of their life style needs, wants and aspirations, and that the retailer have their current interest, needs and wants in mind. This level of intimacy can ultimately create long – tasting and rewarding relationships between the retailer's business and customer.

Facebook has gained importance on digital landscape. Organizations now prefer to use a combination of social media and the traditional media that has been in the market for more than a decade. There have been opinions that various channels in media have faced many challenges that made traditional media like television and radio to earn profits. Also, previous research has shown collaboration between traditional and modern channels of media. Thus, it is a challenge of tough competition in the economic environment that has led to the tightening of budgets in the advertising industry due to the shift of focus from the traditional to the digital media.

Today, Facebook has become the most popular networking website for marketing the products to their target audience by retailers. It serves as a platform, which allows marketers to innovate on their message through posters, and videos, which generates customer engagement through conversations and storytelling by the marketer to the end customer.

Facebook today is being used by a majority of organizations in India to voice their message, engage and collaborate with the millions of users that are on this network 24/7. Yet there is still a lot of untapped potential that this medium can offer to the end users.

A smarter shopping experience must also be beyond the notion of separate channel, customer should be able to shop in the Social Media (Facebook) and able to interact with retailers on web, via mobile device or through call centre in absolutely seamless way with the flexibility to connect, Shopping Experience, research, buy, pay, receive and return. This paper aims to deliver a smarter shopping experience on Facebook, a complete view of customers across a single touch points and a single commerce and marketing platform for interaction and engagement.

**RESEARCH PURPOSE**

The retail landscape has become competitive in nature. Today, retailers have a huge opportunity to tap the development of technology and reach to a larger customer base. It is a challenge for the retailers to keep pace to the development of technology in terms of product communication and delivery to the end consumer.

In India, Facebook is still in a very nascent stage. Due to the explosion of media and mobile retailers need to be far more innovative to engage and retain their target audience. The purpose of the study is to give an insight on the various marketing strategies used by the online retailer to generate Seamless Shopping Experience. Also, on the customer front it is being analysed on how the Message, Poster, Image, and Videos are being created to facilitate a customer relationship through a decision making journey on Facebook.

**METHODOLOGY OF THE STUDY**

This study concerned with both primary and secondary data. Data were collected from the Engineering college students and staff in Madurai. The data collection was made from 1045 respondents under the simple random sampling method; the structured questionnaire has been used as a tool. The simple percentage, Descriptive statistics and ANOVA are used for analyzing the data.

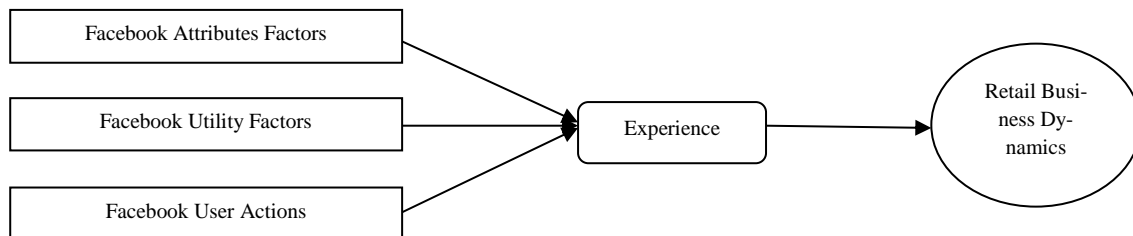
**REVIEW OF LITERATURE**

Marketers here should play a role of aggregators of customer communities (Weber 2009). They are expected to organize and find the most appropriate social network and best possible way of presenting the product to the consumer and respectively receiving customers' feedback through it. It's proved that people trust their friends more than traditional advertising (Nielsen Company). They purchase the product, talk about it online and do marketing activities even without realizing it. That process is known as word of mouth (WOM) advertising but here it is done in online manner.

Social Media Marketing should be gradually implemented into the existing marketing plan of a certain company and not used as a replacement of it (Flagler, 2011). It must be integrated within the other marketing tools that certain company use as the common usage will lead to better results (Lake, 2011). Nowadays there is substantial evidence that online word of mouth affects peoples' attitude toward the product or the brand and respectively that affects the purchase behaviour of the consumer (Chen, 2011). Many scholars recently pay attention and research the influence of social media to product sales, consumer decision making, and sales forecasts or even to existing marketing strategy of the company (Chen, 2011). Widely discussed is also the issue of how social media influences brand awareness but not much attention is paid to the problem of the social media effectiveness towards people's brand attitude and all the arising from that issue - sub problems.

For companies and large corporations content communities are of a great thread because of the chance to be used as platforms for sharing copyright materials (Kaplan, 2009). Social Networking Sites follow the content communities in the review of social media types. It's important to clarify their meaning and usage as they take central place in the current thesis. Through these kinds of sites people connect while exchanging personal information, photos, videos and even instant messages. People can also invite friends to have access to this information. Facebook and Twitter are considered to be the most popular social networking sites. Companies nowadays switch to Facebook in their efforts to bond with the customer (Kaplan, 2009).

**FIGURE 1: CONCEPTUAL MODEL**



**TABLE 1: DEMOGRAPHIC FACTORS OF FACEBOOK USERS**

Demographic factors	No. of Respondents (Total= 1045)	Percentage
<b>GENDER</b>		
Male	564	53.97
Female	481	46.03
<b>AGE</b>		
20-25 yrs	192	18.4
26-30 yrs	745	71.3
31-35 yrs	56	5.4
Above 35 yrs	52	4.9
<b>EDUCATIONAL QUALIFICATION</b>		
Up to HSC	75	7.2
Graduates	459	43.9
Post Graduates	245	23.4
Professional Courses	255	24.4
Higher Studies (Ph.D/M.Phil)	11	1.1
<b>OCCUPATION</b>		
Self Employed/Entrepreneurs	221	21.1
Public sector Employee	79	7.6
Private Sector Employee	262	25.1
Student	469	44.9
Home Maker	14	1.3
<b>FAMILY INCOME</b>		
Up to Rs. 15000	422	40.4
Rs. 15001- Rs. 30000	350	33.5
Rs. 30001- Rs. 45000	174	16.7
Rs. 45001- Rs. 60000	43	4.1
Rs. 60001- Rs. 75000	19	1.8
Above Rs. 75000	37	3.5
<b>FREQUENCY OF SOCIAL MEDIA USAGE PER DAY</b>		
Less than One Hour	69	6.6
1 – 5 hours	347	33.2
6-12 Hours	546	52.2
More than 12 Hours	59	5.6
24 hours Connected	24	2.3
<b>MAIN REASONS FOR EXPERIENCE ON FACEBOOK RETAILERS</b>		
Just like the Brand/ product	265	25.4
Get users reviews & Experience & Share	149	14.3
Easy access to Product/Company information, Available 24/7, and info about new products/ services	274	26.2
Networking & Relationship Building with Brands, Feels more humanised	101	9.6
Entertainment, fun, contests, offers, coupons, deals, etc.	68	6.5
Using the products currently, easy to avail after sales services & product info.	154	14.8
Attractive advertisements and promotions	19	1.8
Useful for scouting Employment opportunities	15	1.4



Table 1 shows that out of the total number of sample respondents. 53.97% were male and 46.03% were female. Age wise distribution shows that 71.3% users belongs to 26 to 30 age group, followed by 20-25 years, 31-35 years and above 35 years , respectively at 18.4%, 5.4% and 4.9%. users of Facebook by education observed that 43.9% users are Graduates; followed by respondents whose education is professional courses (24.4%), Post Graduates (23.4%), upto HSC (7.2%) and rest 1.1% user belong to Higher Studies like M.Phil/Ph.D. Occupation of the Users 44.9% users are Students, 25.1% users are private employee, 21.1% users are self employed and 7.6% users are public sector. Few Facebook users are homemakers (1.3%). Concerned with users family income shows that majority of the users family income is upto 15000 (40.4%) and 33.5% of users income level 15001 – 30000 and 16.7% users belong to income level of 30001-45000. Table shows that the frequency of social media usage per day. Majority that 52.2% of the respondents using Facebook 6-12 hours per day and 33.2% of users on Facebook 1-5 hours per day. Reasons for experience on Facebook is Easy access to Product/Company information, Available 24/7, and info about new products/ services (26.2%)

**AN ANALYSIS OF FACEBOOK ATTRIBUTES**

Facebook Platform has various features, which attracts users to use them for their own benefits. The Facebook attributes are something that looks for on social media (Facebook) platforms. In this research, seven attributes have been taken into consideration, Likewise-Content, Interaction, Sharing of Experience, participation, 24/7 Accessibility and Usefulness.

**H1:** Average performances assigned by respondents to the defined Facebook attributes across Demographic Factors of respondents are alike.

**TABLE 2: OVERALL ANALYSIS OF VARIANCE FOR FACEBOOK ATTRIBUTES ACROSS ALL DEMOGRAPHIC FACTORS**

	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
N	1045	1045	1045	1045	1045	1045	1045
Mean	<b>4.96</b>	4.87	4.73	3.94	3.59	3.06	<b>2.85</b>
SD	2.169	1.744	1.615	1.413	1.667	1.790	2.264

Overall analysis of variance, “Content” is the most preferred Facebook attributes, having mean value of 4.96, followed by Interaction (4.87) and Experience Sharing (4.73). While Usefulness was least preferred attribute among respondents having lowest mean of 2.85.

Means and ANOVA for Gender and Facebook attributes							
Gender	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
F ratio PV*	0.193	0.300	10.469	5.945	3.613	3.088	3.520
	0.660	0.584	0.001	0.015	0.058	0.079	0.061
Means and ANOVA for Age and Facebook attributes							
Age	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
F ratio PV*	1.939	3.593	0.881	2.622	1.146	6.906	2.280
	0.122	0.013	0.450	0.049	0.330	0.000	0.078
Means and ANOVA for Education and Facebook attributes							
Education	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
F ratio PV*	2.502	1.654	0.599	1.762	0.889	0.792	4.648
	0.041	0.159	0.664	0.134	0.470	0.531	0.001
Means and ANOVA for Occupation and Facebook attributes							
Occupation	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
F ratio PV*	6.424	4.121	6.407	1.778	4.035	10.268	4.949
	0.000	0.003	0.000	0.131	0.003	0.000	0.001
Means and ANOVA for Income and Facebook attributes							
Income	Content	Interaction	Sharing of Experience	Participate	24/7 accessibility	Authority	Usefulness
F ratio PV*	5.100	2.014	3.007	1.721	5.764	4.479	3.021
	0.000	0.074	0.011	0.127	0.000	0.000	0.010

\* F rati on Probability value (derived from ANOVA table)

The result show that the preference of Facebook attributes across demographic variables. “Sharing of experience” and “Participation” attributes, remaining all attributes are equally preferred by Gender category. Sharing of experience and participation attributes are found to be statistically significant with respect to the rank preference assigned by gender category. Interaction, Participation and Authority are found to be statistically significant with reference to the rank preferences assigned by the respondents based on Age Group category. Content and Usefulness Seems to be statistically significant with reference to the rank preferences given by respondents based on education category, remaining all other attributes are equally preferred by education category. Occupation category varies significantly in all Facebook attributes except Participation. Interaction and participation as there seems to be a statistically significant variation among all attributes preferred by income category.

**AN ANALYSIS OF FACEBOOK UTILITY FACTORS**

Various factors motivate users of Facebook to use it. Following factors are identified as ‘Facebook Utility Factors’. Seven Utility factors are taken into consideration, Creating relationships and friendship, Entertainment and relaxation, Space for sharing ideas/views/opinions, community and mutual support, Information and advice, Recognition, Intelligence and Opportunity.

**H2:** Average preferences assigned by respondents to defined Facebook Utility Factors across Demographic Factors of respondents are alike.

**TABLE 3: OVERALL ANALYSIS OF VARIANCE FOR FACEBOOK UTILITY FACTORS ACROSS ALL DEMOGRAPHIC FACTORS**

	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
N	1045	1045	1045	1045	1045	1045	1045
Mean	<b>5.60</b>	4.99	4.48	4.05	3.49	2.90	<b>2.50</b>
SD	1.999	1.710	1.590	1.436	1.629	1.607	1.944

\* R&F – Relationships and Friendships, E&R- Entertainment & Relaxation, SIVO- Space for sharing Ideas/View/Opinions, C&M- Community and Mutual support, I&A- Information and Advice, Recog.- Recognition, I&O – Intelligence and Opportunity.

“Creating Relationship and Friendship” is the most preferred Facebook Utility factor having a mean value of 5.60, followed by Entertainment & Relaxation. Least preferred Utility factor is Intelligence and Opportunity having lowest mean of 2.50.

Means and ANOVA for Gender and Facebook Utility Factors							
Gender	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
F ratio PV	<b>3.532</b>	3.787	3.483	0.472	9.086	2.365	<b>0.762</b>
	0.060	0.052	0.062	0.492	0.003	0.124	0.383
Means and ANOVA for Age and Facebook Utility Factors							
Age	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
F ratio PV	<b>8.879</b>	10.899	1.173	1.222	9.987	4.431	<b>3.017</b>
	0.000	0.000	0.319	0.300	0.000	0.004	0.029
Means and ANOVA for Education and Facebook Utility Factors							
Education	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
F ratio PV	<b>2.100</b>	6.043	3.641	1.405	3.957	0.812	<b>3.299</b>
	0.079	0.000	0.006	0.230	0.003	0.517	0.011
Means and ANOVA for Occupation and Facebook Utility Factors							
Occupation	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
F ratio PV	<b>4.781</b>	5.656	6.014	4.948	2.925	5.369	<b>0.427</b>
	0.001	0.000	0.000	0.001	0.020	0.000	0.789
Means and ANOVA for Income and Facebook Utility Factors							
Income	R & F	E & R	SIVO	C & M	I & A	Recog.	I & O
F ratio PV	<b>3.896</b>	6.596	3.771	3.076	1.608	3.833	<b>4.025</b>
	0.002	0.000	0.002	0.009	0.155	0.002	0.001

\* F ration Probability value (derived from ANOVA table)

“Entertainment & Relaxation “and “Provides access to information & advice which cannot be availed anywhere else “are proffered by gender category. “Provides a private free space for sharing ideas, views, opinions “and “Provides a sense of community & mutual support” preferred in the age category. The preference of Facebook utility factors across Education varies significantly in three factors such as “Creating relationship and friendship”, “Provides a sense of Community & Mutual support” and “Recognition”. Occupation category varies significantly in all social media utility factors, except “Opportunity to get involved with Social or Cultural causes”. Facebook utility factors preference across income varies significantly in all utility factors except ‘provides access to information & advice which cannot be availed anywhere else’.

**ANALYSIS OF CONSUMER ACTIONS ON PRODUCT & SERVICES**

The users of Facebook website gets involved with one or the other brands and companies on Facebook liking a Facebook pages. The involvement gives them numerous benefits like Shopping deals, Discounts, Information on new products, News, etc.

**H3:** Average preference of actions taken after liking or sharing product and services on social media across demographic factors is alike.

**TABLE 4: OVERALL ANALYSIS OF VARIANCE FOR FACEBOOK USERS ACTIONS ACROSS ALL DEMOGRAPHIC FACTORS.**

	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
N	1045	1045	1045	1045	1045	1045
Mean	<b>4.74</b>	2.96	4.07	3.51	2.40	3.32
SD	1.544	1.720	1.433	1.417	1.428	1.633

The descriptive statistics shows that, the most preferred action by user is to “Talk” about product and services on Facebook platform. This result displays that there are higher chances of spreading the online word of mouth regarding the product or service.

Means and ANOVA for Gender and Facebook Users acton						
Gender	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
F ratio PV	0.165	1.804	0.787	0.014	0.008	0.188
	0.684	0.180	0.375	0.905	0.927	0.664
Means and ANOVA for Age and Facebook Users acton						
Age	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
F ratio PV	<b>2.286</b>	3.439	0.535	5.555	2.552	6.244
	0.077	0.016	0.659	0.001	0.054	0.000
Means and ANOVA for Education and Facebook Users acton						
Education	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
F ratio PV	<b>5.010</b>	2.122	1.484	2.062	1.089	3.276
	0.001	0.076	0.205	0.084	0.360	0.011
Means and ANOVA for Occupation and Facebook Users acton						
Occupation	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
F ratio PV	<b>2.764</b>	0.421	1.051	1.346	1.810	3.116
	0.026	0.794	0.380	0.251	0.125	0.015
Means and ANOVA for Income and Facebook Users acton						
Income	Talk	Purchase	Recommend	Like/Share	Complain	Suggest
F ratio PV	<b>3.078</b>	2.996	3.586	2.174	1.702	3.169
	0.009	0.011	0.003	0.055	0.131	0.008

\* F ration Probability value (derived from ANOVA table)

All the users action taken by consumers after liking the products and services on Facebook across Gender category is not statistically significant. Users action on Product and services on Facebook across the Age group, varies significantly in all actions, except, “Talk “and “Recommend”. Facebook users action across the Education category varies significantly in two actions such as “Talk” and “Suggest”. The concerned with Occupation category “Talk” and “Suggest” varies statistically significant. Income category respondents equally prefer the action ‘Complain’. All other actions are found to be statistically significant with respect to the Income category.

**CONCLUSION**

The usage of Facebook in India is still at a very nascent stage. The retail industry in India is fragmented and its highly competitive market with a lot of untapped potential. Today, most of the retailer brands on Facebook (Snapdeal, Yourprint, My Dream Store, Club Factory-Fair Price, Paytm mall: online shopping, SHEIN India, Kraftly, Cyankart.com, Addicshop) but the retailers in India are yet to go beyond the stage of awareness.



A conceptual model was being framed and tested in order to understand the retailing Dynamics and the various strategies it follows on Facebook in specific online retailers. The research findings conclude that respondent belonging to various demographic categories like Gender, Age group, City, Education, Occupation, Income, and Facebook Users consumes social medium (Facebook) in different ways. Hence, there is a ready target market of each kind. If used strategically, taking into considerations their behaviour and attitudes, Facebook can prove beneficial to their businesses.

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## ROLE OF TOURISM IN SUSTAINABLE DEVELOPMENT & WELL BEING OF SOCIETY

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### ABSTRACT

*If we consider the economic growth of a country then we found tourism is playing a vital role to promote and develop a countries economy by its multiplier effects. In reality as well as in a significant sense, tourism has emerged as most instrumental phenomena in the economic and social development of society. There is hardly any other economic activity which is capable of generating as much added value, employment and hard currency (foreign exchange) and that also at such a low cost as tourism. With the development of tourism and economy of a country, we should think also about the sustainable development as it takes care about the environment and local community. The wellbeing of a society depends on their development of economy, culture, and environment and so on. But if we go for development in tourism without considering sustainable development then it resulted in various types of damages and destruction to the local communities and environment. So, in future we will find there is nothing except the damages of environment & nature will never forgive us. She will take revenge as we behave with her. Human being can fight with himself and take measure of their benefits but when nature is our opponent then we are helpless we can't fight with her as we don't have so much power as well as equipment's. We develop for what? For our good future, for a better environment, for a better future for our children and long term benefit which will give fruit to the local people, to a particular region, country, nation and whole world also.*

### KEYWORDS

economic development, local community, tourism, sustainable development.

### JEL CODE

Z32

### INTRODUCTION

Tourism means the movement of people from one place to another place apart from his / her residential place for a specific purpose and staying there for at least 24 hrs or more than one night in a rented accommodation. Travel and tourism is the second largest global industry with daily international revenues of approximately US \$ 02 billion, and investments of 12 percent of world GDP. Tourism is a dynamic and exchange process, involves a direct and reciprocal relationship between users and producers of the tourism product. An economic impact assessment can become a useful tool for a community to use in working out what is most economically effective considering the goals for family income, distribution of benefits and costs, fiscal impacts, benefits over time etc. The approach to setting up such a study will depend on the situation, the community, and the analyst's judgment. In case of tourism, it is playing a vital role to promote and develop a countries economy by its multiplier effect. There is hardly any other economic activity which is capable of generating as much added value, employment and hard currency (foreign exchange) and that also such a low cost as tourism. But if we think only the development on the basis of infrastructure like Road, Accommodation, Shops, Restaurant, Parks etc. and try to promote tourism as much as possible then we can see various type of damages in society. Development of tourism may harm environment, local flora & fauna, local culture and affect the society also. So, in future it may be the cause of destruction of a particular region or society. On the other hand, we will have to promote tourism for the development of a particular region on society because it helps development by its multiplier effect. So, we should think for the society, culture and environment or should think for the development at any cost?

To come out from this problem the new concept has emerged which is known as Sustainable Development means the development should take place without harming the environment, local flora & fauna, community and culture. Also the benefit comes by development should go to the local people. Here again we have another form of tourism i.e. Sustainable tourism. Sustainable tourism embraces all segments of the industry with guidelines and criteria that seek to reduce environmental impacts, particularly the use of nonrenewable resources, using measurable benchmarks and to improve tourism's contribution to sustainable development and environmental conservation.

### REVIEW OF LITERATURE

"Travelers not only learn about the destination, they learn how to help sustain its character while depending their own travel experiences. Residents learn that the ordinary and familiar may be of interest and value of to outsiders". (Sustainable Development and Tourism, Romila Chawla, 2003).

Travel business do their best to employ and train local people, by local supplies, and use local services by which the benefit goes to local people and if we consider these way on sustainable way then it will be long term beneficial for both the local people and travelers also.

The principle of sustainable tourism shows that an integrated approach to tourism planning and management is required to achieve sustainable tourist. Earlier there was no reorganization of combining the needs of traditional urban management (transportation, land use planning, marketing, economic development, fire and safety etc.) but now it has been recognized. The most important principles of Sustainable Tourism include:

- ✓ Tourism should be initiated with the help of community inputs and community should maintain control of tourism development.
- ✓ Tourism should provide quality employment to its community residents and a linkage between the local business and tourism should be established.
- ✓ Training should be given in all level – national, regional and local on the basis of international standards. Guidelines for tourism operations, impact assessment, monitoring of cumulative impacts and limits to acceptable change should be established.
- ✓ Provide proper education to the local to improve and manage resources.

On the other hand, when we think for the Economic Development of a particular region / community then an economic impact assessment can become a use full tool for a community to use in working out what is most economically effective considering the goals for family income, distribution of benefits and costs, benefits over time etc. The study is not the final word on whether a particular choice should be made; it simply presents alternatives and their effects.

### INCOME MULTIPLIER

We can find out the Income Multiplier, it may be defined as the increase in income resulting from each dollar injected into the economy of a region.

#### MARGINAL PROPENSITY TO CONSUME (MPC)

If we take an example and assumed that 80 percent of the income was represent in each round and on the other way we can say that in the region being considered, 80 paise of each rupees of increased income was spent. This proportion (80 percent) is called Marginal Propensity to Consume and is defined as the fraction of each dollar of increased income that is spent. A simple relationship exists between the Multiplier (M) and the Marginal Propensity to Consume (MPC):

$$M = \frac{1}{1 - MPC}$$

Given the MPC of an area, the multiplier can be readily computed from this formula and the impact of tourism expenditures on local income can be examined. For example if the MPC is 75 percent the multiplier is

$$M = \frac{1}{1 - MPC} = \frac{1}{1 - 0.75} = \frac{1}{0.25} = 4$$

M = 4

Now if MPC is 75 percent then what happens to the other 25 percent of increase income? It can be either saved or spent on purchasing imports. In both case, the money is removed from circulation, money removed from circulation is termed "leakage".

Savings eventually find their way into investments, which increase the productive capacity of an area. This is desirable. Thus, any action to increase the value of the multiplier should focus on imports. If we consider that, the 25 percent of income not spent is disposed of as follows:

07 percent is saved and 18 percent goes to pay for imports.

**GENERATION OF EMPLOYMENT**

While we think for tourism then we have to think for investment in infrastructure and once we think for that, it provides employment for large numbers of semi-skilled people. Each dollar / Rupees invested in the tourism industry creates more jobs than each dollar / rupees invested in.

**TOURISM STIMULATES INVESTMENT**

The tourist industry has a unique structure. It is characterized by and in fact is an agglomeration of a large of very small units, covering variety of different service trades like, small restaurants, motels, guest houses, laundries, arts and crafts shops and others. Thus, investment in infrastructure and sometimes-expensive superstructure by the government stimulates investment in numerous smaller businesses. Because of the small size of these businesses, capital requirements are relatively low and investment generally proceeds at a rapid pace.

**TOURISM-REDISTRIBUTING WEALTH**

When a tourist earns income in one region and spends it in another for travel purposes, a redistribution of wealth has taken place.

Here we can say, income "leaks" out of the origin area and is "injected" in the destination area.

**BENEFITS A BROAD CROSS SECTION OF THE HOST POPULATION**

We know that tourism is characterized by the existence of a large number of very small businesses that support and are ancillary to the industry. The benefit of tourism share by entire community.

The following table rates how quickly tourism receipts seep through the economy and the diversity of the business that benefit from it.

TABLE 1

VISITOR SPEND FOR	TRAVEL INDUSTRY SPEND FOR	BENEFICIARIES
Lodging Food Beverages Entertainment	Wages & Salaries Tips & Gratuities Payroll Commissions Music and Entertainment Administrative and general Expenses Legal and Professional services. Purchase of Food & Beverages Etc.	Accounts Advertising & Public Relation Appliance Stores Architects Arts & Crafts Producers Automobile Agency Bakers Boys Butchers Carpenters Cashiers Charities Clerks Clothing stores Clubs Confectioners Contractors Cooks Culture organization Dairies Dentists Department stores Doctors Dry Cleaning Establishments Farmers Fisherman Freight Forwarders
Gifts and Souvenirs Personal Care Drugs & Cosmetics. Internal Transportation Tours & Sightseeing Miscellaneous	Purchase of Materials & supplies. Repairs and Maintenance Utilities – Electric, Gas, Water Transportation Licenses Rental of Premises and Equipment Replacement of assets	Garages & Auto repairing Gardeners Gift Shops Government Government Education Health Roads and Rail Road Development & Others Green grocers Grocery stores Financiers Furniture stores Importers Insurance Agencies Land Lords Agents Government Officials Night Clubs Office Equipment Suppliers Painters Petrol Stations Plumbers Porters Publishers Real estate Broker Developers Restaurants Room Maids Share Holder Sporting Events Return to Investors Transportation Travel Brokers Taxi Hire Car service Unions Wholesale Establishment

Source: Romila Chawla, 2004, Economics of Tourism & Development.

**METHODOLOGY**

The objectives of this study were to investigate the role of Tourism in Sustainable Development and Well Being of Society. The study was conducted in one phase and on the basis of secondary data. To establish the relation between tourism, sustainable development and its effect in society I have chosen a particular state, West Bengal.

**BRIEF OF THE STATE**

West Bengal now proposed to be renamed as Paschim Bangla is located in the Eastern part of India and the nation's fourth most populous state. It surrounded on the north by Sikkim & Bhutan, on the East by Assam & Bangladesh, on the south by the Bay of Bengal and on the west by Orissa, Bihar & Nepal. The state stretches from the Himalayas in the north to the Bay of Bengal in the south. West Bengal adjoins three international borders viz. Bangladesh, Nepal & Bhutan.

The state is spread over an area of 88,752 sq. k.m. and a population of 80.18 million as per 2001 census. There are 19 districts, 341 blocks and 40782 villages.

The capital and largest city of the state is Kolkata, the third largest urban agglomeration and the fourth largest city in India. Siliguri, Asansol, Durgapur and Burdwan are key Metropolitan cities. Other major cities and towns in West Bengal are Howrah, Raniganj, Haldia, Jalpaiguri, Kharagpur, Darjeeling, Midnapore, Tamluk, Malda and Koch Bihar.

**BRIEF HISTORY**

Bengal has a rich cultural heritage and historical past. The region has played a significant role in the Indian history, both in the ancient and medieval ages. The British first started their colonization through the East India Company. West Bengal has given birth to a large number of well known philosophers, scientists, patriots etc. Such as Sri Aurobindo, Rabindranath Tagore, Netaji Subhash Chandra Bose, Swami Vivekananda and many others who played crucial role in the political as well as spiritual reformation in the nation.

**TOURISM SCENARIO IN WEST BENGAL**

The state has all the diversities of nature and is to that extent a tourist's dream. Except desert, the state has Mountain, Hill, Beach, Forest, Heritage, Cultural significance.

The snow capped peaks of the Himalayas, Darjeeling, referred by many as the Queen of Hill Stations. Darjeeling Himalayan Railway declared as a world heritage site, the state has another world heritage site Sunderban famous for its Mangroves & Royal Bengal Tiger. Apart from that it has vast Tea Estate covering Darjeeling, Dooars and so many historical landmarks.

The land has developed long unending beaches with gentle rolling sea lined with casuarinas forest which offers the tourist an opportunity to experience nature by a number of sea resorts viz. Digha, Shankarpur, Junput, Bakkhali, Sagardwip etc.

**WEST BENGAL TOURISM – OBJECTIVES & POLICY**

- Tourism has been declared as an Industry by the state in 1996. The Government has taken an effort to promote the state as a tourism hub with a number of schemes.
- The West Bengal Tourism Policy 2008 lays down the broad policy and plan for the state in the tourism sector.

**BASIC OBJECTIVE OF THE TOURISM POLICY OF WEST BENGAL**

- To improve the market share of West Bengal in the inbound tourism segment and a remarkable share in Domestic tourism market also.
- To promote responsible and sustainable tourism through the integrated development of the infrastructure and not sporadic stand alone and fragmented development.
- To develop tourism products by its unique ecological, historical, cultural, religious, wildlife, sports, shopping, health care, educational and human asset.
- To facilitate tourism by all segments, particularly the middle and lower income tourists, by making the tourist spots in the state more easily accessible through single window facility at the state capital and at the district head quarters and or the internet.
- To grade the direct and indirect economic benefits of tourism by its tourism activities, which can be done by creating more employment opportunities and by dispersing tourism into the hinterland which will further the socio-economic goals of the Government.
- To develop (Public-Private-Partnership model) to take advantage of complementary capital and intellectual assets to promote tourism.
- To increase the revenue earnings of the state and the foreign exchange reserves of the Country.

**TRENDS OF VISITORS TO THE STATE COMPARING TO THE NATIONAL DATA**

TABLE 2

Year	Domestic Tourist (Lacs)	Foreign Tourist (Lacs)	Total (Lac)	Total Domestic (India)	West Bengal Share	Total Foreigner (India)	West Bengal Share
1996	44.40	1.83	46.32	1401	3.18%	50.03	3.66%
1997	45.77	1.94	47.71	1598	2.86%	55	3.5%
1998	46.45	1.95	48.4	1682	2.76%	55.4	3.52%
1999	47.03	1.99	49.02	1906	2.47%	58.3	3.41%
2000	47.37	1.98	49.35	2201	2.15%	58.9	3.36%
2001	49.43	2.84	52.27	2364	2.09%	54.41	5.22%
2002	88.44	5.29	93.73	2669	3.31%	51.6	10.25%
2003	113.01	7.05	120.06	3090	3.66%	67.1	10.51%
2004	123.80	7.76	131.56	3662	3.38%	83.6	9.28%
2005	135.67	8.96	144.63	3919	3.46%	99.5	9.01%
2006	156.00	8.86	164.86	4623	3.37%	117.5	7.54%
2007	185.80	11.54	197.34	5265	3.53%	132.7	8.70%
2008	193.14	11.33	204.47	5629	3.43%	141.12	8.03%
2009	205.28	11.8	217.08	5630	3.65%	142.12	8.30%
2010	210.72	11.92	222.64	5631	3.74%	143.12	8.33%

Source: IL&FS Infrastructure, April, 2012.

From the above data, we can say that the state has been receiving around 3-3.7% of the domestic tourist. The position with foreign tourists is a little improved with West Bengal accounting for over 8% of the foreign tourists.

**DESTINATIONS & PRODUCTS**

The Government of West Bengal wish to promote the state as an ideal tourist spot to the tourist and aims at developing specialized tourism products with unique opportunity, such as:

- Coastal & Beach Tours – Digha, Sagar Island etc.
- Netaji Museum – Home of Netaji –Subhas Chandra Bose.
- Jorasanko – Home of Rabindranath Tagore
- National Museum
- Agri – Horticulture Garden at Alipore
- Botanical Garden – Shibpur line with Kew Gardens, London.
- Cruise on the river Ganges
- Pilgrimage Tourism – Dakshineswar, Furfura Sharif, Bandel Church, Tarapeeth, Gutia Sharif, belurmath, Jairambati, Jai Chandipur, Tarakeswar, Nalhati, zali Ghat and other important places.
- Eco Tourism – Centres of Folk dance and Drama across the state.
- Educational Heritage & Culture – Shantiniketan and Bishnupur.
- Himalaya Tourism (Darjeeling & surrounding areas) Trekking, white water rafting, adventure tourism.
- Tea Tourism – Darjeeling & Dooars.

**SUSTAINABLE TOURISM PLANS**

West Bengal is a state rich in resources and bio diversity which can be utilized to promote sustainable tourism and as per the state tourism policy the state is going to focus on below mentioned products.

Nature Based Tourism: West Bengal has everything except desert and rich in its resources. Some of the assets are unique like Sunder bans Delta, Tea Plantations, Beaches, and Mountains & Wildlife. These are giving competitive advantage to the West Bengal.

Cultural Tourism: West Bengal is the cultural capital of India. It has constantly produced thoughts, ideas and events which have brought forth freshness and rejuvenation in the society both in India & the World. The specific components of cultural tourism which will be focused upon will include Fairs, & Festivals Tourism, Heritage Tourism, Arts & Crafts Tourism, Cuisine Tourism, Film Tourism, Family, Relatives and friends Tourism and Rural tourism.

**THE NUMBER OF PROJECTS AND AMOUNT SANCTIONED UNDER THE FIVE-YEAR PLAN FOR THE STATE OF WEST BENGAL IS PROVIDED IN THE FOLLOWING TABLE:**

**TABLE 3**

2008 - 2009		2009 - 2010		2010 - 2011	
NO. OF PROJECT	SANCTIONED (INR CRS)	NO. OF PROJECT	SANCTIONED (INR CRS)	NO. OF PROJECT	SANCTIONED (INR CRS)
10	37.94	07	28.37	08	22.02

Source: India Tourism Statistics' 2010.

**SUSTAINABLE TOURISM AND DEVELOPMENT WITH STAKE HOLDERS**

State Government, State Tour & Travel Operators and other representatives have been identified the following Circuits / Projects:

**CIRCUIT 1 – Beach Tourism Circuit in Purba Medinipur:** Digha – Shankarpur – Tajpur – Junput – Mandarmani.

**CIRCUIT 2 – Pilgrim Tourism Circuit:** Ganga Sagar – Birbhum – (Tarapeeth – Bakreshwar – Nalhati-Fullura-Saithia – Kankalitala) Furfura Sarif.

**CIRCUIT 3 – Nature Tourism:** Dooars & Darjeeling Circuit.

**CIRCUIT 4 – Sunderban Circuit:** Gadkhali, Jharkhali, Kohikhali, Frazer Island.

**MEGA TOURISM PARK**

It is proposed that the Tourism Park shall be developed at Gajoldoba in Jalpaiguri District.

Gajaldoba is just 25 k.m. south east from siliguri, the busy business hub and within the district of Jalpaiguri. The area is located on the important corridor of Nepal, Bhutan, Bangladesh and other N.E. States. Bagdogra airport and New Jalpaiguri Rail head are just out skirt of the town and very well connected to almost all major cities of India.

The place is very close to the existing popular tourist destinations of the state – Chapramari Wildlife Sanctuary and Gorumara National Park.

The beautiful site provides grand view of Teesta River, Himalayan Peaks, and adjoining Baikuntapur Forest. The site has already become very popular amount the local tourist and bird watchers for migratoury birds including Brahmini ducks, Bar headed goose, Pintails, Black Ibis, Cormorants and ducks etc.

PICTURE 1 & 2



**STRENGTH OF THIS SITE IS AS FOLLOWS**

- Unparallel natural beauty by the side of the barrage and the forest.
- Vast water reservoir of Teesta Barrage.



- Availability of huge government land.
- Ideal place for the migratory birds.
- Absence of any comparable product in the district.

The site has tremendous potential for developing as a Mega Project site for national as well as international tourists. The project includes development of 3 to 5 star resorts for high budget tourists, lodges for mid budget tourists. There may be a Golf Course, River sports and Trekking Tracks etc.

**RURAL TOURISM**

The Government of West Bengal also proposed to develop Rural Tourism keeping in mind Puralia Rural Cluster & Nadia Music Cluster.

**CARRYING CAPACITY**

Since the Ministry of Tourism, Government of India aims to promote sustainable tourism development it was deemed essential to establish the sustainable Carrying Capacity of the priority Tourist Circuit.

Tourism Carrying Capacity is defined as “the maximum number of people that may visit the tourist destination without causing destruction of the physical, economic and socio cultural environment and an unacceptable decrease in the quality of visitor’s satisfaction”. (Alvin Chandy, 2009).

Assessment of Tourism Carrying Capacity is based on three major indicators: Physical – Ecological, Socio – Demographic and Political- Economic.

**PHYSICAL AND ECOLOGICAL INDICATORS** are based on fixed components and flexible components (Infrastructure systems like water supply, electricity, transportation etc.)

**SOCIO– DEMOGRAPHIC INDICATORS** refer to social and demographic issues and importance to local communities, as they relate to the presence and growth of tourism.

**POLITICAL – ECONOMIC INDICATORS** refer to the impacts of tourism on local economic structures activities etc.

The objective is to be improving the quality and quantity of tourism infrastructure at tourist destination / circuit in a sustainable manner. Hence priority should be given to the physical and ecological indicators. It is expected that improvement in physical infrastructure at destinations / circuits would translate into improvements in the socio – demographic and political – economic conditions of these places.

**TOWN WISE CARRYING CAPACITY ASSESSMENT IN WEST BENGAL**

TABLE 4

Tourist Town	Existing Load	Carrying Capacity	Available Capacity	Estimated Load	Available Capacity
	2010				
New Digha	11917	14480	2563	29862	15382
Shankar Pur	7942	26480	18538	18164	8316
Tajpur	7654	9680	2026	9632	48
Mandarmani	7450	31200	23750	10739	20461
Junput	89499	114400	24901	103425	10975

Source: IL&FA Infrastructure, April, 2012.

**DESTINATION WISE CARRYING CAPACITY ASSESSMENT IN WEST BENGAL**

TABLE 5

Destination	Existing Daily Load 2010	Carrying Capacity	Available Daily Capacity 2010	Estimated Daily Load 2020	Available Daily Capacity 2020	Measure	Enhanced Capacity
Digha Beach	8250	3000	- 750	26506	-12164	Setting up of Parks, Art & Culture, Village & Water Parks etc.	1036
Shankarpur Beach	1111	4000	8889	3570	4115		4115
Tajpur Beach	417	2500	5833	1339	3143		3143
Mandarmani Beach	1021	3500	7729	3280	3501		3501
Junput Beach	111	2500	6139	357	3772		3772

Source: IL&FA Infrastructure, April, 2012.

From the above table we can see that the available capacity to hold the tourists at the destinations of West Bengal till 2020. Apart from Digha Beach which does not have capacity to hold the tourist even in 2010. Thus to avoid the excess load of tourist from Digha Beach and undue stress and degradation, some measures have been proposed by the authority. Proposals of an Amusement Park, Art and Culture, Water Sports activity etc can carry load of 13,200 persons per day to reduce such load from Digha. Not only should that Government take step to promote circuit and other nearby destinations also.

**EMPLOYMENT GENERATION**

TABLE 6

EXPECTED EMPLOYMENT GENERATION	
Digha	1,13,763
Shankarpur	41,574
Tajpur	43,212
Junput	21,762
Mandarmoni	11,934

Source: IL&FA Infrastructure, April, 2012.

From the above table of Expected Employment generation we can say that tourism generate a huge amount of Employment. As Digha generate maximum tourist the employment generation of Digha also high approx 1, 13,763. Relatively Shankarpur, Tajpur, Jujput, Mondarmani also generate employment as per the tourist demand.

**CONCLUSION**

Tourism is the second largest industry in the world and generates maximum employment by its multiplier effect to a country. It helps a country to develop, not only that it contributes countries, development of infrastructure, culture, cuisine, education, history, environment and so no. It also helps a country to earn Foreign Exchange. It generates employment in different sector by its Direct & Indirect effect. Tourism helps a region to develop and the benefit goes to the local people / society / community. It creates the opportunity to conserve the environment and wild life also. The multiplier effect of tourism give benefits to the difference sector of people and is a good option of earning. Government can earn Foreign Exchange and taxes from this industry.

So, we should think for the development of tourism in future and try to promote as many as destination in the national level & international level and try to generate more employment for the economic development of a country. But we will have to go for sustainable development and think for the well being of society and long run benefit. Because if we don’t respect nature and go for development without any concern about nature then one day will come when we will be held responsible for the destruction of globe by our own. So, we need to respect the nature and follow her command. And go for sustainable development by which we can enjoy the bless of nature for a long time and give a good moment to our future generation also.



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## THE IMPACT OF DIGITIZATION IN FUTURE VISION

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## ABSTRACT

*'Digital India' is a central programme to make India ready for a knowledge-based future. The focus of the Rs 1.13 lakh crore initiatives is on using technology to create a participative, transparent and responsive government. The major targets of the programme are to create a digital infrastructure as a utility to every Indian citizen. This includes providing high-speed internet, mobile phone and bank account enabling participation in digital & financial space, shareable private space on a public cloud, and creating a safe and secure cyber space. The biggest internet firms in India & are Inbound Marketing, Microsoft & Google Certified. The Digital technology only solution provider for businesses across who plan to reach to their prospects using Digital & Traditional Marketing Mediums. It include brands from Healthcare, Real Estate, Education & Banking Industry. The primary objectives of the present study are to identify usage of digital level and helps in small-scale industry in digital technology. In case of emergency, people can look for immediate do's. Foster the overall economy because of rapid increase in trade, literacy rate, health betterment etc.*

## KEYWORD

Digital process.

## JEL CODE

L86

## INTRODUCTION

The number of personal computers globally surged from 100 million in 1990 to 1.4 billion by 2010. The users for mobile too grew at even more rapid pace, which proves that digitization, and digitalization is accelerating very fast. Developed countries such as Germany, United Kingdom, and the United States took nearly 4 years on average to move from the emerging to the transitional stage of digitization; now, developing countries are imitating the same amount of pace in less than 2 yrs with average growth from 7 points to 10 points. The study is about the digital adaptability by users, analysis of effectiveness and its challenges. The Global Information Technology Report 2012 indicated that the accelerating pace of digitalization is very rapid which is stemmed from increased liberalization supported by the growing affordability and availability of digital technologies and skills to operate digital devices has hastened the deployment of supporting infrastructure for digitalization. It is being argued that whether effectiveness is deployed with access to the basic infrastructure, knowledge, skills etc. to make use of digitization for specific ends. It further specifies that there is absence of direct interventions for supportive impact of technology among mass/localities for achieving elite Tech Social Ecosystem. So, plotting of incidences aligned with ancillary benefits of digitalization would definitely intervene for accessibility and connectivity, which is prime importance for usage of digitization.

## OBJECTIVES OF THE STUDY

1. To study the concepts of digital India programmes.
2. To find out the knowledge based future Digital process.
3. To find out challenges faced in implementation of this digital programmes.
4. To find out the practical solutions and innovative ideas to accomplish the vision of a digital India a reality.

## RESEARCH METHODOLOGY

The study intend to use both Primary and secondary data and the information is retrieved from the internet, via journal research paper and electronic experts opinions on the same subject matter.

## EFFECTIVENESS' DIGITAL TECHNOLOGY

- Digital locker system to minimise usage of physical documents and enable their **e-sharing** via registered repositories.
- MyGov.in as an **online platform** to engage citizens in governance through a "Discuss, Do and Disseminate" approach.
- Swachh Bharat Mission Mobile app to achieve the goals set by this mission.
- E-Sign framework to allow citizens to **digitally sign documents** online using Aadhaar.
- E-Hospital system for important healthcare services such as online registration, fee payment, fixing doctors' appointments, online diagnostics and checking blood availability online.
- National Scholarship Portal for beneficiaries from submission of application to verification, sanction and disbursement.
- Digitise India Platform for large-scale digitisation of records in the country to facilitate efficient delivery of services to the citizens.
- Bharat Net programme as a high-speed digital highway to connect all 250,000 gram panchayats of country –
- **The world's largest rural broadband** project using optical fibre.
- BSNL's Next Generation Network to replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.
- BSNL's Next Generation Network to replace 30-year old telephone exchanges to manage all types of services like voice, data, multimedia and other types of communication services.
- BSNL's large scale deployment of wi-fi hotspots throughout the country.
- 'Broadband Highways' as one of the pillars of Digital India to address the connectivity issue while enabling and providing technologies to facilitate delivery of services to citizens.
- Outsourcing Policy to create such centres in different north-eastern states and in smaller towns across the country.
- Electronics Development Fund to promote innovation, research and product development to create a resource pool within the country as also a self-sustaining eco-system of venture funds.
- To make Post Offices multi-service centres.

**BENEFITS OF DIGITAL TECHNOLOGY**

- India proposes to cover 55669 villages of India, which are not covered by mobile coverage by 2018 and empower our villages in the use of digitized India and benefit from it.
- GOI till July 2016 has laid optic in 23604 gram panchayat has laid optic fibre cable. The idea is to cover 55000 villages by 31st of March 2018. It is expected all 2.5 lakh village panchayat will be benefited by 2018.
- Providing high speed mobile connectivity, providing government servicing, providing for electronic manufacturing and providing jobs to our youths are some of the priorities of GOI.
- Recently in Shimoga and surrounding districts over production of Banana resulted in distress sales for one Rupee a Kg and some left their goods on the road, because of over production. This huge loss to the farmers can be avoided by digitizing India. Both the purchaser and the sellers are benefited.
- The digitization helps in the reduction of court cases where our farmers wastes there time, money and effort.
- The digitization helps in the reduction of court cases where our farmers wastes there time, money and effort. They spend not less than 100 days in a year either meeting munsifs or village accountant or officials in revenue offices or lawyers or attend various courts.
- They also have to cough up huge amounts of money. All these can be avoided because of latest technology, satellite imaging, digitization.
- Farmers can be informed of the crop pattern that is suitable for the season, the rainfall for the year, the fertilisers and pesticides required can be got through the net.

**FUTURE VISION OF DIGITAL POWER**

- The focus is on being **transformative – to realize IT + IT = IT**
- The focus is on making **technology central to enabling change**.
- It is an **Umbrella Programme** – covering many departments.
- It weaves together a large number of ideas and thoughts into a **single, comprehensive vision** so that each of them is seen as part of a larger goal.
- Each individual element stands on its own. But is also part of **the larger picture**.
- It is **coordinated by DeitY, implemented by the entire government**.
- The weaving together makes the Mission **transformative in totality**

**DIGITAL SCHEME**

- Pulls together many **existing schemes**.
- These schemes will be **restructured and re-focused**.
- They will be **implemented in a synchronized manner**.
- Many elements are only **process improvements with minimal cost**.

**DIGITAL EMPOWER**

- Digital Infrastructure as a Utility to Every Citizen
- Governance & Service on Demand
- Digital Empowerment of Citizens

**INFRASTRUCTURE AS A UTILITY TO EVERY CITIZEN**

- **High speed internet** as a core utility
- **Cradle to grave digital identity** -unique, lifelong, online, authenticable
- **Mobile phone & Bank account** enabling participation in digital & financial space
- Easy access to a **Common Service Centre**
- Shareable **private space on a public cloud**
- **Safe and secure Cyber-space**

**GOVERNANCE & SERVICES ON DEMAND**

- **Seamlessly integrated** across departments or jurisdictions
- Services **available in real time** from online & mobile platform
- **All citizen entitlements** to be available **on the cloud**
- Services digitally transformed for improving **Ease of Doing Business**
- Making **financial transactions electronic & cashless**
- Leveraging GIS for **decision support systems & development**

**NINE PILLARS OF DIGITAL INDIA**

- Broadband Highways
- Universal Access to Phones
- Public Internet Access Programme
- E-Governance – Reforming government through Technology
- eKranti – Electronic delivery of services
- Information for All

**MONITORING COMMITTEE ON DIGITAL INDIA**

- **Prime Minister – Chairman**
- Finance Minister
- Minister of Communications & IT
- Minister of RD
- Minister of HRD
- Minister of Health

**SPECIAL INVITEES**

- Principal Secretary to PM
- Cabinet Secretary
- Secretaries of Expenditure, Planning, DoT and Posts
- Secretary, DeitY – Convener

**ESTIMATED COSTS AND IMPACTS**

- Overall Costs of Digital India
- Rs 100,000 Cr in ongoing schemes (only DeitY, DOT & not incl. those in other line Ministries) Rs 13,000 Cr for new schemes & activities

**IMPACT OF DIGITAL INDIA BY 2019**

- ❖ Broadband in 2.5 lakh villages, universal phone connectivity
- ❖ Net Zero Imports by 2020
- ❖ 400,000 Public Internet Access Points

**PUBLIC WI-FI HOTSPOTS FOR CITIZENS**

- ❖ Digital Inclusion: 1.7 Cr trained for IT, Telecom and Electronics Jobs
- ❖ Job creation: Direct 1.7 Cr. and Indirect at least 8.5 Cr.
- ❖ e-Governance & eServices: Across government
- ❖ India to be leader in IT use in services – health, education, banking
- ❖ Digitally empowered citizens – public cloud, internet access

**CHALLENGES & CHANGES NEEDED**

- ❖ Program on this scale never conceived
- ❖ Each Pillar/program has own challenges
- ❖ Human Resource Issues
- ❖ NIC - not equipped for a fraction of this task (obsolesce) - needs revamping & restructuring
- ❖ DeitY – needs program managers – at least 4 more officers at senior levels

**CHIEF INFORMATION OFFICER / CHIEF TECHNOLOGY OFFICER**

- ❖ It could begin with cios - 10 major ministers.
- ❖ It can be anyone from within or outside Government.
- ❖ To be patterned as AS & FAs – dual reporting

**FINANCIAL RESOURCE ISSUES**

- ❖ Mostly structured around ongoing programs : Better focus, need some restructuring
- ❖ Some others are process improvements or better utilisation of resources
- ❖ A few new programs may be needed – particularly in Electronics manufacturing and Skill Development.

**INDUSTRY BENEFITS**

- Program covers many other departments in small industry
- Need commitment and effort in all department
- Leadership and support critical for success of organization.

**RECOMMENDATIONS**

- Stop prosecuting citizens who express legitimate opinions in online debates, posts and discussions.
- Revise take down procedures, so that demands for online content to be removed do not apply to legitimate expression of opinions or content in the public interest, so not to undermine freedom of expression.
- Reform IT Act provisions 66A and 79 and take down procedures so that content authors are notified and offered the opportunity to appeal take down requests before censorship occurs.
- Stop issuing take down requests without court orders, an increasingly common procedure.
- Lift restrictions on access to and functioning of cyber cafes.
- Take better account of the right to privacy and end unwarranted digital intrusions and interference with citizens' online communications.

**CONCLUSION**

The government continues its regime of internet filtering and the authorities have stepped up surveillance online and put pressure on internet service providers to collude in the filtering and blocking of content, which may be perfectly legitimate. Despite its lively democracy, strong tradition of **press freedom and political debates**, India is in many ways struggling to find the right balance between freedom of expression online and other concerns such as security. While civil society is becoming increasingly vocal in attempting to push this balance towards freedom of expression, the government seems unwilling or unable to reform the law at the speed required to keep pace with new technologies, in particular the explosion in social media and small industry benefits. The report has found the main problems that need to be tackled are online censorship through take down requests, filtering and blocking and the criminalization of online speech. Civil society and political initiatives against this legislation have increased and demands for new transparent and participatory processes for making internet policy have gained popular support.

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## REGIONAL VARIATIONS IN LITERACY RATES - A PROFILE OF ANDHRA PRADESH

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**ABSTRACT**

*The study find out that the literacy has been recognised as a key factor in the process of economic development. It is also an established fact that investment in education is the most important component of investment in human capital. The importance of investment in human capital is aptly stressed by Schultz in the following words. "By some miracle, India or some other low income country like India were to acquire as it were, overnight a set of natural resources, equipment and structures, including techniques of production, what would they do with them given the existing skills and knowledge of the people? Surely the imbalance between the stock of human and non-human capital would be tremendous". As such, more efforts must be made to achieve education levels with a special focus on females in all the regions of the State as it is the pre-requisite for generating the skilled labour and to achieve balance between the stock of human and non-human capital. Then only the objectives of "sustainable development" and "inclusive growth" become more meaningful.*

**KEYWORDS**

literacy, investment in education.

**JEL CODES**

I2, I24.

**INTRODUCTION**

Education is perhaps the single most important instrument through which human resource can be fully developed. It is very well said that knowledge is power. Education enables people to acquire basic skills and inculcate abilities, which are helpful in raising the social and economic status of the person. Women's education has assumed special significance in the context of planned development because the efforts of planned development arc to bring all those in to the main stream who are left outside. However, female education is constrained by the socio-economic conditions.

Free and compulsory education to all children up to the age of fourteen years is constitutional commitment in India. The government of India initiated a number of programmes to achieve the goal of universalisation of Elementary education among which the Sarva Shiksha Abhiyan (SSA) launched in 2001, is the most recent one. It aimed at achieving universal primary education by 2007 and universal elementary education by 2010. For successful implementation of any educational programme, effective monitoring, coupled with efficient information system, is essential.

While monitoring framework under SSA is developed separately, concerned efforts have been made towards strengthening of educational management information system (EMS) in India.

A number of governmental and semi-governmental agencies like Department of Secondary and Higher Education Government of India. National Council of Education Research and Training (NCERT) and semi-governmental agencies like the National sample survey organization, census of India, and the International Institute for Population Studies (National Family Health Survey), Indian Market Research Bureaus (IMRB) have collected information regarding the school related indicators, facilities in schools, enrolment, teacher-pupil ratio etc. Indian education system is one of the largest education systems in the world. National Policy on Education (1986) is a landmark in its approach to women's education. National literacy mission is another step towards eradication of illiteracy in the age group of 15-35 years. Once illiteracy is removed, other venues of development get open automatically. By educating a woman of the house, one educates the whole family.

Education helps to capture not only economic opportunities by women, but leads to secure better health, hygiene and nutrition. All of them place women on the path of development in the nation building. For ensuring girls access at least to primary education strengthening of Non-formal education machinery is also necessary. By these children, who have been enrolled but have been dropped out, can be easily brought into the education system.

The progress made by India in the field of education after independence, is unprecedented in Asia. For the first time in the history of India, a National System of Education is established, there by the access to education is open to all students irrespective of caste, creed or sex. It is universally accepted that education is a significant instrument in improving the status of women. Federico Mayor, the director General of UNESCO, once said "Education is the key to create equitable environment and a democratic and peaceful society where women and men play equally important roles".

In the pre-independence era, the objective of education was to make women more capable of fulfilling family responsibilities. But in the post-independent era, a new dimension appeared due to the acceptance of equality of women and their need to play multiple roles in society. The constitution of India guarantees equality of opportunity to all citizens irrespective of race, sex, caste and community and directs the state to endeavor to provide free and compulsory education for all children until they complete the age of 14 years (Article 45). The Indian Education Commission in its report (1966) expressed unhappiness about the failure to achieve the target. In view of immense resources needed for this purpose, the commission recommended phasing programme. Even though enough emphasis was laid on the education of women, the delay in achieving the constitutional direction in respect of primary education has affected girls adversely.

The educational policy enunciated in 1968 provided a uniform system of education all over the country. The National Policy of Education (NPE) of 1986, updated in 1992, proposed a dual track approach, designed to promote simultaneously adult literacy and primary education, with the focus on girls. During the decade 1981-1991, female literacy increased at a faster rate than male literacy. Nonetheless, the rural-urban differential in literacy increased in 2001.

**OBJECTIVES**

In the light of account given above an attempt in made in this paper

1. To study the literacy rates in Indian in general during the period 1951 to 2011.
2. To analyse the regional variations in the literacy rates of males and females in the state of Andhra Pradesh during the period 1991 to 2011, and
3. To analyse the dropout rates of boys and girls at different levels of schooling in the state of Andhra Pradesh during the period 1991 to 2011.

**RESEARCH METHODOLOGY**

In order to study the regional variations, the state of Andhra Pradesh is sub-divided in to three regions for analytical convenience as follows:

1. North Coastal Andhra (Srikakulam, Vizianagaram, Visakhapatnam)
2. South Coastal Andhra (East Godavari, West Godavari, Krishna)
3. Rayalaseema (Chittore, Kadapa, Anantapur, Kurnool).

The data are collected from secondary sources.

**ANALYSIS**

**Literacy Rates in India:** The statistical data relating to the literacy rates of males and females are presented in Table 1.

**TABLE 1: LITERACY RATES IN INDIA**

Year	Persons	Males	Females
1951	16.67	24.95	7.93
1961	24.02	34.44	12.96
1971	29.45	34.95	18.69
1981	43.67	56.50	29.85
1991	52.21	64.13	39.29
2001	65.38	75.85	54.16
2011	74.04	82.14	65.46

Source: Directorate of School Education, Andhra Pradesh.

As can be seen from the above table, the overall percentage of literacy has increased from 16.67 in 1951 to 74.04 in 2011. As far as the percentage of female literacy is concerned, the increase has been from 7.93 in 1951 to 65.46 in 2011. Though the ratio of female literacy in comparison to male literacy is lagging behind in all the census data, it is a matter of satisfaction that female literacy has increased almost by seven folds during the period 1951 to 2011.

But still many more miles to go to reach the status of complete literacy particularly in the case of females.

**Regional Variations in the Literacy Rates of Males and Females:** The statistical information relating to the literacy rates of males and females in the three regions of the state of Andhra Pradesh is shown in Table - 2.

**TABLE 2**

S.No	Regional wise	District	Male		Female		Total	
			1991	2011	1991	2011	1991	2011
1	North coastal Andhra	Srikakulam	49.14	71.61	23.52	52.08	36.22	61.74
		Vizianagaram	45.93	68.15	22.47	49.87	34.19	58.89
		Visakhapatnam	56.13	74.56	34.60	59.34	45.51	66.91
2	South Coastal Andhra	East Godavari	55.32	74.10	42.26	66.95	48.79	70.50
		West Godavari	55.75	77.65	43.30	71.01	53.38	74.32
		Krishna	60.55	78.30	45.54	69.18	53.16	73.74
		Guntur	56.54	74.79	35.85	60.09	46.35	67.40
		Prakasam	53.14	72.92	27.06	53.11	40.30	63.08
		Nellore	58.04	75.74	36.99	61.99	47.61	68.90
3	Rayalaseema	Chittoor	62.61	79.83	36.44	63.28	49.75	71.53
		Kadapa	63.14	77.78	32.35	56.77	48.12	67.30
		Anantapur	55.92	73.02	27.61	53.97	42.18	63.57
		Kurnool	53.24	70.10	26.04	49.78	39.97	59.97
Andhra Pradesh			55.12	74.77	32.72	59.96	44.08	67.35

Source: Primary Census Abstract, Census 2011, Directorate of Census Operations, Hyderabad, Andhra Pradesh.

Note: Literacy excluded children in the age group of (0-6) years.

As can be seen from the table that out of the three districts grouped in the North coastal Andhra region, the two districts Viz., Srikakulam and Vizianagaram are found to be lagging behind the state average literacy rate of 55.12 in the case of males and 32.72 in the case of females in 1991.

It is disheartening to note that by 2011, all the three districts in the North Coastal Andhra region are lagging behind the respective state averages of males & females. In the case of south coastal Andhra region, with the exception of only Prakasam district, all the other five districts registered a literacy rate above the respective state averages of males and females in 1991. However, by 2011, while East Godavari slightly lagged behind the state average in the case of males, Prakasam District lagged behind both in the case of male literacy rates and female literacy rates when compared to the respective state averages.

Of the four districts grouped in the Rayalaseema region, only Kurnool lagged behind the state average in respect of males, while in the case of females Kadapa, Anantapur and Kurnool also lagged behind the female state average in 1991. It is disheartening to note that by 2011, Kurnool as well as Anantapur also lagged behind the state average of males, while in the case of female literacy rates Kadapa, Anantapur and Kurnool maintained the same status of lagging behind the female state average. Hence, some more special efforts must be made to improve the literacy rates in general and more particularly the female literacy rates in this region.

Hence, from the above analysis, it may be inferred that literacy rates of both males and females are higher than the respective state average in the districts of West Godavari, Krishna, Guntur, Nellore, Chittoor, both in 1991 and 2011. Thus from this it may be inferred that the districts which are prosperous are also the districts that experience higher rates of literacy in respect of both males and females. The most important observation from the above table is that all the regions of the state have been experiencing lower female literacy rates when compared to the corresponding male literacy rates both in 1991 and in 2011. As such, programmes have to be launched much more vigorously to boost up the literacy rates with special focus on female literacy rates in all the region of Andhra Pradesh.

**TABLE 3: DISTRICT WISE, RURAL AND URBAN WISE LITERATE POPULATION AND LITERACY RATE (2011 Census)**

S.No	District	Literacy Rate					
		Males			Females		
		Total	Rural	Urban	Total	Rural	Urban
1	Srikakulam	71.61	68.86	85.97	52.08	48.35	71.06
2	Vizianagaram	68.15	63.73	84.85	49.87	44.00	71.51
3	Visakhapatnam	74.56	62.96	86.88	59.34	44.74	75.51
4	East Godavari	74.10	70.65	84.62	66.95	63.52	77.07
5	West Godavari	77.65	75.17	87.52	71.01	68.58	80.32
6	Krishna	78.30	73.71	84.96	69.18	63.56	77.30
7	Guntur	74.79	70.14	83.97	60.09	53.77	72.25
8	Prakasam	72.92	69.80	85.73	53.11	48.60	71.18
9	Nellore	75.74	71.19	86.74	61.99	56.02	76.46
10	Kadapa	77.78	74.72	83.72	56.77	51.49	66.94
11	Kurnool	70.10	66.15	80.04	49.78	43.61	65.01
12	Anantapuram	73.02	69.41	82.32	53.97	48.77	67.06
13	Chittoor	79.83	76.34	88.12	63.28	57.72	76.45
<b>Andhra Pradesh</b>		<b>74.77</b>	<b>70.48</b>	<b>85.00</b>	<b>59.96</b>	<b>54.25</b>	<b>73.42</b>

Source: Primary Census Abstract, Census 2011, Directorate of Census Operations, Andhra Pradesh, Hyderabad.

Note: Literates exclude children in the age group of (0-6) years



As could be seen from the table that Andhra Pradesh literacy ratio is 67.35. Men literacy ratio is 74.77 and female literacy ratio is 56.99 percent, but excluding literacy in the age group of (0-6) years Total Andhra Pradesh. Literacy rate of men is 74.77 out of this 70.48 percent in rural and 85.00 percent in urban areas. Total female literacy rate is 59.96 but 54.25 percent in rural and 73.42 percent in urban.

Among different districts of Andhra Pradesh male literacy ratio is highest in Chittoor district, next place occupied by the Krishna district, later positions occupied by the Kadapa and West Godavari district. In rural literacy rate is also high in Chittoor district, later position occupied by the West Godavari district urban literacy rate is also highest in Chittoor and West Godavari districts.

To sum up Chittoor and West Godavari districts occupied first and second positions, because most of the educational institutions located in these areas and people were more aware about the society.

The lowest literacy rate occupied by Vijayanagaram, Kurnool and Srikakulam districts. To take rural literacy rate lowest position occupied by the Visakhapatnam, next position is Vijayanagaram because these are the places are the hill areas and also lack of effective school facilities, in addition to that, most of the areas are tribal areas. Urban literacy ratio is also throughout in Chittoor and West Godavari districts.

To take female literacy rate of Andhra Pradesh is 59.96, 54.25 and 73.42 percent in rural and urban respectively. Among different districts of Andhra Pradesh female literacy rate is highest in West Godavari and Krishna districts lowest percentage occupied by the Kurnool and Vijayanagaram due to lack of awareness and facilities. To take rural female literacy rate highest in West Godavari and Krishna districts and lowest in Kurnool and Vijayanagaram. To take urban literacy rate highest in West and East Godavari districts, lowest by Kurnool and Kadapa districts.

#### DROP - OUT RATES

Now it is of interest to study the dropout rates in the regions of the state of Andhra Pradesh. The statistical data relating to the dropout rates at various levels of education are presented in table-4.

TABLE 4

S. No	District	Classes (I-V)			Classes (I-VII)			Classes (I-X)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	Srikakulam	8.35	6.04	7.24	14.78	12.20	13.53	17.64	16.77	17.21
2	Vizianagaram	9.22	9.40	9.31	23.91	21.60	22.79	33.76	33.71	33.74
3	Visakhapatnam	4.25	4.22	4.24	6.70	14.65	10.69	13.43	18.22	15.84
4	East Godavari	2.38	0.94	1.69	5.69	3.57	4.64	15.54	12.07	13.39
5	West Godavari	-3.67	-5.20	-4.42	2.86	1.83	2.35	11.95	9.43	10.68
6	Krishna	-4.67	-4.48	-4.58	5.97	7.60	6.82	12.38	15.81	14.09
7	Guntur	-9.10	-8.76	-8.93	-1.60	6.62	2.52	18.86	25.87	22.37
8	Prakasam	8.52	8.42	8.47	26.77	28.81	27.78	36.62	38.61	37.60
9	Nellore	3.32	3.74	3.53	18.32	19.62	18.95	28.80	29.43	29.11
10	Kadapa	15.06	13.28	14.21	30.38	27.09	28.80	40.82	37.01	38.98
11	Kurnool	11.87	12.73	12.29	27.93	36.58	32.17	37.17	44.79	40.90
12	Anantapuram	10.86	9.41	10.17	21.91	20.31	21.13	32.04	31.23	31.64
13	Chittoor	5.51	5.61	5.56	10.81	12.01	11.40	19.20	20.49	19.83
	Andhra Pradesh	4.88	4.30	4.60	14.91	16.59	15.74	24.54	25.93	25.23

As could be furnished from the table that Dropout rates in different districts of Andhra Pradesh, that can be classified into three categories, i.e., I - V, I - VII, and I - X. Total Dropout rate in Andhra Pradesh from I - V is 4.60% out of that 4.88% for Boys and 4.30% for Girls. Total Dropouts are highest in Kadapa and Kurnool districts. Total Kadapa district dropouts are 14.21, out of that 15.06% for Boys and 13.28% for Girls, Kurnool district total Dropouts are 12.29% out of that 11.87% and 12.73% Boys and Girls respectively. Main reason for these two districts lack of sufficient rainfall therefore people are migrated from native place to other places.

To take dropout rate from I - VII, Total Dropouts of Andhra Pradesh from 15.74% out of that 14.91%, 16.59% Boys and Girls respectively. Highest positions occupied by the Kurnool and Kadapa districts.

To take Dropout rate from I - X, total dropout rate is 25.23%, out of that 24.54, 25.93% for Boys and Girls respectively, Kurnool and Kadapa districts occupied first and second positions.

To sum up Dropout rates in 2014-15 Girls rate is higher than Boys due to migration, lack of facilities, lack of awareness. One of the greatest economist Prof. Amartya Kumar Sen stated that most of the parents treated as their children as assets in rural areas, but in the urban area they treated as liabilities. Kurnool and Kadapa districts are having most of the rural areas.

#### CONCLUSION

Literacy has been recognised as a key factor in the process of economic development. It is also an established fact that investment in education is the most important component of investment in human capital. The importance of investment in human capital is aptly stressed by Schultz in the following words. "By some miracle, India or some other low income country like India were to acquire as it were, overnight a set of natural resources, equipment and structures, including techniques of production, what would they do with them given the existing skills and knowledge of the people? Surely the imbalance between the stock of human and non-human capital would be tremendous".

As such, more efforts must be made to achieve education levels with a special focus on females in all the regions of the State as it is the pre-requisite for generating the skilled labour and to achieve balance between the stock of human and non-human capital. Then only the objectives of "sustainable development" and "inclusive growth" become more meaningful.

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**CUSTOMER SATISFACTION WITH LIFE INSURANCE COMPANY: A CASE STUDY OF SHIMLA DISTRICT OF HIMACHAL PRADESH**

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**ABSTRACT**

*Over the last few years, we can see a tremendous growth in life insurance sector in India. People are concerned for their and loving ones future. Life insurance helps the needy beneficiary in his bad time. However, there is cutthroat competition between life insurance companies. Therefore, proactive approach should be adopted for customer's satisfaction. This study explores the impact of demographic factors on customer's satisfaction with Life Insurance Company. It was depicted that mostly policyholders find their life insurance company safe and trustworthy. It is suggested that Life Insurance Company should provide prompt and right information to make their existing customers loyal so that they can spread positive word of mouth about them.*

**KEYWORDS**

life insurance company, customer's satisfaction, policyholders, beneficiary.

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G22

**INTRODUCTION**

Life is not certain whether death is certain. Life insurance is a provision to partially compensate for financial losses for a contingency linked with human life, accident and disability etc. Every human in this world is subject to unforeseen and uncalled for hazards or dangers, which may make him and his family vulnerable. The risk cannot be averted but loss occurring due to certain risk can be distributed amongst the agreed persons (Kaur and Negi, 2010). It is a greater tool for both protection as well as helping a customer in saving in a disciplined manner. In short, person needs life insurance due to dying too soon and living too long. Standard of living of people is reflected by the availability of good insurance facility related to human security and risk coverage (Khichee, 2011). Life insurance is an agreement between two parties the insurer (insurance company) and the insured (person who pays the premium/policy holder). It depends upon the law of mortality. Insured is a person on whose life policy is written by the insurance company in exchange of premium. Life insurance encourages the long term saving and re-investment in public and private sector (Beck and Weeb, 2003).

Customer satisfaction is a measure of how products and services supplied by a company meet expectation of customer. In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of success of any business organisation. The concept of consumer satisfaction occupies a central position in any business organization. In the Indian context that the insurance habits among the general public during the independence decade was rare but there was a remarkable improvement in the Indian insurance industry soon after the economic reform era due to healthy competition from many national as well as international private insurance players (Srenivas and Anand (2012). Now life insurance is the fastest and emerging market in India (Singh and Lal, 2011). There are 24 life insurance companies working in India. There is tough competition in life insurance sector. LIC is biggest and sole public sector insurance player in our country. Despite various initiatives taken by private players, customers still prefer public sector (Thakur, 2010). Sirajudeen (2012) in his study found that quality, timely advertisement, prompt and error free services are key ingredients for customer satisfaction. Considering the importance of customers and competition in life insurance market, the present study will analyse the present level of customer's satisfaction with life insurance companies and suggest ways to improve customer satisfaction.

**OBJECTIVES OF THE STUDY**

1. To study the satisfaction of customers with life insurance company.
2. To find out significant difference in customers satisfaction with life insurance Company with respect to demographic variables such as age, gender, occupation and income.

**RESEARCH METHODOLOGY**

For the present study, convenience sampling has been used. For this purpose, 120 respondents are studied. Results are based on the information collected through a detailed and exhaustive questionnaire prepared to carry out an in-depth exploratory and empirical level research in Shimla town of Himachal Pradesh selected purposively as this is largest urban settlement in the state. The desired sample size was based on adequacy considerations for statistical meaningfulness as well as on availability of resources.

**RESULTS AND DISCUSSION****RESPONDENT'S SHARE OF LIFE INSURERS**

The study has taken two sectors in life insurance business one is LIC another is private sector insurance companies. The study highlighted that majority of respondents hold a policy by Life Insurance Company (78.33%).

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

Demographic Factors	Characteristics	Freq.	%
Age	18-28	43	35.83
	29-38	27	22.5
	39-48	28	23.33
	49-58	15	12.5
	58 and above	7	5.83
Gender	Male	83	69.71
	Female	37	30.83
Marital Status	Single	36	30
	Married	84	70
Occupation	Student	16	13.33
	Business	36	30.00
	Govt. employee	38	31.67
	Household	14	11.67
Education qualification	Matriculation	15	12.5
	Plus two	21	17.5
	Graduation	44	36.67
	PG and above	40	33.33
	Below Rs.1,00,000	5	4.17
	Rs. 100,000-300,000	16	13.33
	Rs.300,000-5,00,000	65	54.17
	Above Rs.5,00,000	34	28.33

The respondent profile as displayed in table 1 indicates user’s profile. Most of the respondents (69.73%) were males and graduate (36.67). Majority of respondents are in the age group of 18-28 years (35.83) and between 39-48 years (23.33). Most of the respondents have income is between 3 to 5 lakh (54.17%) and above 5 lakh (28.33%). Seventy percent respondents are married. The profile of respondents indicates maximum of them are Govt. employee (31.67%) followed by businessmen (30%).

TABLE 2: RESPONDENTS’ SATISFACTION TOWARDS LIFE INSURANCE COMPANIES

Variables	Gender				t-test
	Male		Female		
	Mean	SD	Mean	SD	
Trust	4.59	0.76	4.68	0.47	-0.62
Safety	4.61	0.76	4.81	0.39	-1.47
Long business	4.52	0.83	4.65	0.58	-0.86
Entertain well	4.55	0.80	4.59	0.64	-0.27
Preference to goals	4.45	0.81	4.65	0.58	-1.36
Buy more products	4.40	0.92	4.38	0.89	0.10
Recommend to others	4.19	1.03	4.49	0.69	-1.58
Right information	4.73	0.71	4.49	0.96	1.57
Belief	4.67	0.81	4.59	0.86	0.48
Prompt services	4.67	0.82	4.70	0.57	-1.87
Loyalty	4.69	0.91	4.68	0.66	0.06

It is observed from table 2 that respondents highly agreed with satisfaction variable safety (74.2%) followed by trust (68.3%), entertainment (67.7%), long history of business with companies (67.5%), preferences to financial goals (61.7%) and buy more insurance products (59.2%). Half of the respondents highly agreed with recommending their present insurance companies to others. On the other side respondents highly disagreed for loyalty (82.5%), for prompt services (78.3%) and for belief and right information (77.5%) each.

TABLE 3: CUSTOMER SATISFACTION TOWARD INSURANCE COMPANY WITH RESPECT TO GENDER

Vari	Response				
	H	D	M	A	H
Tru	2	-	2	3	8
Saf	2	-	2	2	8
Lon	2	-	8	2	8
En-	2	-	7	3	8
Pref	2	-	7	3	7
Buy	3	2	1	3	7
Rec	5	-	1	4	6
Rig	9	2	1	2	3
Be-	9	2	-	3	3
Pro	9	2	3	-	3
Loy	9	1	5	-	4

Table 3 presents the level of satisfaction among the life insurance customers toward company on the basis of their gender. It is observed from the table that female respondents have scored higher on the seven components of satisfaction i.e. trust, safety, long history of business, entertain well, preference to financial goals, recommend to others and prompt services with their mean values (M=4.68), (M=4.81), (M=4.65), (M=4.59), (M=4.65), (M=4.49) and (M=4.70) respectively where as male respondents have obtained higher mean values on rest of four variables i.e. buy more insurance products (M=4.40), right information (M=4.73), belief (M=4.67) and loyalty (M=4.69). Further, it can be noted that gender have no significant effect on mean difference of any of the variables.

TABLE 4: CUSTOMER SATISFACTION TOWARD INSURANCE COMPANY WITH RESPECT TO MARITAL STATUS

Variables	Marital status				t-test
	Single		Married		
	Mean	SD	Mean	SD	
Trust	4.58	0.77	4.63	0.65	-0.34
Safety	4.61	0.76	4.70	0.63	-0.67
Long business	4.50	0.84	4.58	0.73	-0.54
Entertain well	4.47	0.91	4.61	0.67	-0.89
Preference to goals	4.39	0.87	4.56	0.70	-1.13
Buy more products	4.19	1.09	4.48	0.81	-1.56
Recommend to others	4.31	0.88	4.27	0.97	0.16
Right information	4.53	1.00	4.71	0.70	-1.66
Belief	4.31	1.91	4.80	0.55	-0.309
Prompt services	4.39	1.05	4.81	0.54	-2.87
Loyalty	4.64	0.89	4.70	0.81	-0.37

Table 4 exhibits the mean difference analysis of single and married respondents. The finding indicate that married have higher mean value on s variables i.e. trust (M=4.63), safety (M=4.70), long history of business (M=4.58), entertain well (M=4.61), preference to financial goals (M=4.56), buy more insurance products (M=4.48), right information (M=4.71), belief (M=4.80), prompt services (M=4.81) and loyalty (M=4.70). On the other hand single have scored highest mean value for only one variable i.e. recommend to others (M=31). Further, it can be noted that marital status has no significant effect on mean difference of any variable.

TABLE 5: CUSTOMER SATISFACTION TOWARD INSURANCE COMPANY WITH RESPECT TO AGE

Variables	Age group (years)										F-test
	18-28		29-38		39-48		49-58		Above 58		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Trust	4.72	0.45	4.44	1.12	4.64	0.55	4.67	0.48	4.43	0.53	0.8
Safety	4.74	0.44	4.48	1.12	4.79	0.49	4.67	0.48	4.57	0.53	0.8
Long business	4.60	0.58	4.41	1.15	4.50	0.74	4.73	0.45	4.71	0.48	0.6
Entertain well	4.56	0.66	4.48	1.12	4.61	0.62	4.53	0.51	4.86	0.37	0.3
Preference to goals	4.49	0.66	4.37	1.14	4.64	0.55	4.47	0.51	4.71	0.48	0.5
Buy more products	4.26	0.90	4.37	1.14	4.57	0.63	4.47	0.51	4.43	1.51	0.5
Recommend to others	4.30	0.83	4.04	1.45	4.43	0.69	4.33	0.61	4.43	0.53	0.6
Right information	4.72	0.73	4.56	1.08	4.61	0.83	4.80	0.41	4.57	0.53	0.3
Belief	4.51	0.98	4.59	0.20	4.79	0.41	4.87	0.35	4.71	0.48	0.7
Prompt services	4.58	0.82	4.63	1.07	4.79	0.41	4.87	0.35	4.71	0.48	0.5
Loyalty	4.77	0.61	4.37	1.44	4.79	0.49	4.87	0.35	4.57	0.53	1.3

Table 5 depicts mean difference analysis of level of satisfaction among respondents with respect to different age group. It is shown that age group (49-58 years) has shown highest and same mean value for three components of customer’s satisfaction i.e. belief, prompt services and loyalty with mean score (M=4.87) each and it is highest in the above table whereas age group (39-48 years) has scored highest mean values for the same variables along with variable safety i.e. (M=4.79) each. Respondents belonging to highest age group (above 58 years) have shown highest satisfaction with variable entertain very well i.e. (M= 4.86) and lowest for three components of customer’s satisfaction i.e. trust, buy more insurance products and recommend to others with their mean value (M=4.43) each. Further, it can be seen that age group (29-38 years) has shown highest mean score for prompt services (M=4.63) whereas age group (18-28 years) has shown highest mean value for loyalty (M=4.77) and lowest for variable buy more insurance products (M=4.26). it can be seen that age groups (29-38 years), (39-48 years) and (49-58 years) don’t want to recommend their respective companies to others with their mean values (M=4.04), (M=4.43) and (M=4.33) respectively. All age groups except lowest age group are highly satisfied with prompt services and they are least interested in recommending to others. However, it can be seen that age has no significant effect on mean difference of any variable.

TABLE 6: CUSTOMER SATISFACTION WITH RESPECT TO EDUCATION QUALIFICATION

Variables	Education qualification								F-test
	Matriculation		Plus two		Graduation		PG and above		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Trust	4.73	0.45	4.67	0.48	4.55	0.95	4.62	0.49	0.33
Safety	4.80	0.41	4.71	0.46	4.55	0.95	4.75	0.43	0.99
Long business	4.80	0.41	4.71	0.46	4.39	1.01	4.58	0.63	1.56
Entertain well	4.87	0.35	4.76	0.43	4.45	0.97	4.48	0.67	1.82
Preference to goals	4.80	0.41	4.57	0.50	4.39	0.99	4.50	0.64	1.18
Buy more products	4.67	0.61	4.48	0.92	4.32	1.02	4.32	0.85	0.67
Recommend to others	4.33	0.81	4.48	0.68	4.23	0.98	4.22	1.07	0.40
Right information	4.80	0.41	4.76	0.43	4.55	1.04	4.68	0.76	0.55
Belief	4.80	0.41	4.86	0.35	4.66	0.96	4.48	0.93	1.21
Prompt services	4.80	0.10	4.86	0.78	4.68	0.13	4.55	0.13	0.90
Loyalty	4.73	0.59	4.90	0.30	4.57	1.06	4.50	0.82	0.77

Table 6 depicts mean difference analysis of level of satisfaction among respondents with respect to educational qualification. It is seen that respondents having qualification upto plus two have obtained highest mean value for loyalty (M=4.90) variable of customer’s satisfaction which is highest in above table and lowest mean value for components buy more insurance products and recommend to others i.e. (M=4.48) each. It can be observed that graduates have shown high mean value for belief (M=4.66) component of customer satisfaction whereas postgraduates have shown highest mean value for right information (M=4.68). Respondents having lowest education qualification have shown highest mean value for three dimensions of customer’s satisfaction i.e. right information, belief and prompt services with mean score (M=4.80) each. All respondents have shown lowest mean value for variable recommend to others which means that they do not want to recommend their respective companies to others. Further, it can be observed that education qualification has no significant impact on any variable.

TABLE 7: CUSTOMER SATISFACTION TOWARD INSURANCE COMPANY WITH RESPECT TO OCCUPATION

Variables	Occupation										F-test
	Student		Business		Govt. Employee		Household		Professional		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Trust	4.56	0.51	4.39	0.96	4.76	0.49	4.86	0.36	4.62	0.61	1.92
Safety	4.69	0.47	4.47	0.97	4.76	0.49	4.93	0.26	4.69	0.60	1.49
Long business	4.50	0.63	4.42	0.99	4.66	0.62	4.86	0.36	4.44	0.81	1.13
Entertain well	4.44	0.72	4.42	0.96	4.68	0.62	4.79	0.42	4.56	0.72	1.00
Preference	4.31	0.70	4.28	0.97	4.66	0.58	4.86	0.36	4.56	0.72	2.34
Buy more	4.00	1.09	4.28	1.16	4.55	0.68	4.57	0.51	4.50	0.73	1.39
Recommend	4.19	0.65	4.19	1.00	4.45	0.89	4.50	0.65	4.00	1.31	0.94
Right information	4.38	1.02	4.56	0.97	4.76	0.70	4.93	0.26	4.69	0.60	1.40
Belief	4.19	1.16	4.56	0.96	4.76	0.71	4.93	0.26	4.81	0.40	2.18
Prompt services	4.50	0.72	4.58	0.96	4.82	0.39	4.93	0.26	4.50	1.09	1.16
Loyalty	4.62	0.80	4.64	0.96	4.84	0.43	4.93	0.26	4.25	1.37	1.79

Table 7 illustrates the mean difference analysis of customer’s satisfaction variables with respect to occupation. It was found that households have shown highest and same inclination for four variables of customer satisfaction i.e. right information, belief, loyalty and prompt services with their mean value (M=4.90) each which is highest mean value throughout the table. Respondents who are students, businessmen and Government employee have shown highest inclination for loyalty dimension of customer satisfaction with their mean scores (M=4.62), (M=4.64) and (M=4.84) respectively. Further, it was shown that professional have scored highest mean value for belief component with mean score (M=4.81). It was observed from the table that businessmen, Government employees households and professionals have shown lowest mean value for variable recommend to others (M=4.19), (M=4.45), (M=4.50) and (M=4.00) respectively which means that they are not interested in recommending their respective companies to others. On the other hand, students were not interested in buying more products from their present life insurance company. The table further depicts that occupation don’t leave any right significant impact upon mean difference of any variable of satisfaction.

TABLE 8: CUSTOMER SATISFACTION WITH RESPECT TO ANNUAL FAMILY INCOME

Variables	Annual family income (Rs.)								F-test
	Below 100000		100000-300000		300001-500000		Above 500000		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Trust	4.60	0.54	4.50	0.51	4.65	0.60	4.62	0.60	0.19
Safety	4.40	0.54	4.81	0.40	4.68	0.59	4.65	0.59	0.51
Long business	4.40	0.54	4.69	0.47	4.54	0.70	4.56	0.70	0.23
Entertain well	5.00	0.00	4.50	0.51	4.60	0.78	4.47	0.78	0.81
Preference to goals	4.20	0.44	4.56	0.51	4.54	0.74	4.47	0.74	0.36
Buy more products	3.80	0.83	4.62	0.50	4.40	0.91	4.35	0.91	1.07
Recommend to others	3.80	0.83	4.44	0.51	4.34	1.91	4.18	1.19	0.79
Right information	4.80	0.44	4.69	0.47	4.58	0.91	4.76	0.74	0.73
Belief	4.80	0.44	4.69	0.47	4.62	0.89	4.68	0.87	0.95
Prompt services	4.80	0.44	4.75	0.44	4.66	0.79	4.68	0.84	0.96
Loyalty	5.00	0.40	4.75	0.44	4.71	0.80	4.56	1.07	0.66

Table 8 exhibits the mean difference analysis of customer satisfaction with respect to annual family income of respondents. The results have shown that customers belonging to lowest income group (below Rs. 100000) has shown maximum and same inclination for two variables of customer satisfaction i.e. entertain me very well and loyalty with mean value (M=5.00) each which is highest throughout the table and scores minimum and same for two components i.e. buy more insurance products and recommend to others with mean value (M=3.80) each. It can be observed that respondents belonging to income group (Rs. 1,00,000-Rs. 3,00,000) have shown highest mean value for safety (M=4.81) whereas (Rs. 3,00,001-Rs. 5,00,000) have scored for loyalty (M=4.71). Highest income group (above Rs. 5,00,000) have believed that right information is being provided to them with mean score (M=4.76). All respondents have scored lowest mean values for one variable i.e. recommend to others, it means that they don’t want to recommend their present life insurance company to others. Further, it can be noted that respondents belonging to lower and middle income groups are more loyal to their present life insurance companies. Furthermore, it can be found that income has no significant effect on mean difference of any of variable.

**CONCLUSION**

From the above study, we can conclude that in current scenario, overall customers are satisfied with Life Insurance Company. Respondents are satisfied with right information, speedy services and have belief in their present insurance companies. They have long business relationship with present insurance companies and interested to make it stronger by purchasing more insurance product. Respondents feel that their insurance companies are providing preference to their financial goals. But mostly customers don’t want to recommend their companies to others. Therefore, it is suggested that Life insurance companies should try to gain confidence of investors and solve their queries as soon as possible by providing sufficient evidence. In this way, customers will think more positive about them and also be willing to recommend them to others.

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## MARKETING STRATEGIES OF DAIRY CO-OPERATIVE SOCIETIES IN KERALA: WITH SPECIAL REFERENCE TO MILMA ERNAKULAM DISTRICT

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### ABSTRACT

*Dairying has a long history in India, and Dairy Co-operative societies are the cornerstone of this long and proud industry. This study analysed MILMA, the Dairy Co-operative Society in Kerala with regards to how MILMA achieved such growth; why there is not even a major competitor for MILMA in Kerala; what are the marketing strategies adopted by MILMA, how MILMA maintain its customers etc. Focus of the study restricted to Ernakulam district. The study is descriptive and analytical in nature and has made use of surveys and questionnaires. All data collected was tabulated to facilitate interpretation. Percentage analysis is used for analysis of data collection. Statistical device like tables, graphs are also used for the analysis of data. The study suggests that brand loyalty is the main reason for its success rather than other factors analyzed. The results of this study suggest that MILMA can increase sales through more advertising.*

### KEYWORDS

MILMA Ernakulam district, marketing strategies, dairy co-operative societies.

### JEL CODES

L3, M31.

### I. INTRODUCTION

In India, dairying is regarded as an instrument for social and economic development. The country's milk supply comes from millions of small producers, who are scattered throughout rural areas. Dairying as a discipline has received great amount of attention in India from economists, sociologists, scientists, and planners. As dairying covers a very wide area, the scope of this study of dairying is spread over the physical aspects such as size, number and growth of bovine population, economic aspects covering demand, supply, and cost of milk production, and operational aspects, such as procurement, processing, and marketing. Marketing is an important tier of the modernised productions and distribution. The contemporary marketer will set the marketing goals and objectives, develop the marketing plan, organize the marketing function, implement the marketing plan, and control the marketing programme to ensure that the marketing goals and objectives are achieved. The marketing programme covers product, price, place, and promotion. During last three decades, the sector witnessed uninterrupted growth in terms of animal production and milk production. It is still continuing. There are wide variety of products from MILMA and these products have been accepted by the people. There is a steady demand for its products. Therefore, it is relevant to study how MILMA achieved such growth, why there is not even a competitor for MILMA, what are the marketing strategies adopted by MILMA, how MILMA maintain its customers etc. The study was conducted with special reference to Ernakulam district.

The following are the objectives of the study

1. To ascertain the current level of competitiveness of Dairy Co-Operative Societies.
2. To evaluate the performance of Dairy Co-Operative Societies.
3. To examine the customer service level of Dairy Co-Operative Societies.
4. To assess the operational efficiency of Dairy Co-Operative Societies.

### II. LITERATURE REVIEW AND MODEL DEVELOPMENT

Only the marketing aspects of dairy sector are reviewed in this study.

(Jha and Debroy, 2000)<sup>1</sup> conducted a study on "globalizing Indian dairy sector". The study found that the impressive growth of India's dairy sector during the last 3 decades has been possible through supportive trade policies.

(Ashoke Kumar Ghosh and Keshav Lall Maharjan, 2002)<sup>2</sup> undertook a "study on milk marketing channels in Bangladesh". The study revealed that the price fluctuation in marketing was one of the most important constraints on the small dairy farmer.

(Rajendran and Samarendu Mohanty, 2004)<sup>3</sup> in their study "Dairy Co-operatives and Milk Marketing in India" made an attempt to review the existing status of milk marketing and dairy co-operatives in India. The results of the study indicated that 80 percent of the milk produced by the rural producers is handled by an unorganized sector and the remaining 20 percent is handled by an organized sector.

(Abinesh, 2004)<sup>4</sup> made a "Comparative study on consumer behavior towards loose milk and packed milk". The study found that the factors like quality, quantity, hygienic aspect, and government intervention influence consumer behavior.

(Karmakar and Banerjee, 2006)<sup>5</sup> conducted a "study on Opportunities and challenges in the Indian dairy industry". The study found that with the emergence of World Trade Organization (WTO) and the imports and exports getting liberalized in the global economy, the dairy industry faces both an opportunity for growth, as well as a threat for its growth.

(Srikanth, 2007)<sup>6</sup> in his thesis analyzed "the performance, working of dairy cooperatives, the cost return structure of milk production of dairy farmers and opinions of member producers on the problems of production and marketing of milk".

(Saiyed Sohelahmed, 2009)<sup>7</sup> in his study "customer bonding towards Amul milk & milk products in Anand district" made an attempt to understand the customer behaviour, satisfaction and the influence of various marketing mix towards Amul.

(Shankar Ambhore, 2010)<sup>8</sup> in his research paper "Dairy co-operative: an overview", made an attempt to study the functions of dairy co-operatives in India.

(Kumar and Staal, 2011)<sup>9</sup> in their study "Is traditional milk marketing and processing viable and efficient?" attempted to estimate the costs and returns of traditional milk marketing and processing.



(Thirunavukkarasu and Sudeepkumar, 2011)<sup>10</sup> in their study attempted to identify the various "milk marketing options for dairy farmers and to compare the cooperative system with the integrated contract system". The study found that there are many milk marketing options like informal system, co-operative and contract system etc. A majority of dairy farmers, around 57.3 percent, had shifted from one marketing option to another. The rest, 42.7 percent, of dairy farmers remained in the same marketing option from the day they began commercial milk production.

### III. METHODS AND MATERIALS

The study is descriptive and analytical in nature and has adopted the following methodology: The population for the study was customers of dairy Co-operative societies. Data was collected from the beneficiaries residing in Muvattupuzha Taluk. Random sampling was used as the sampling technique. Hundred beneficiaries were identified. Both primary data and secondary data were used for the study. Primary data was collected through structured questionnaire. The questionnaire elicited information regarding the profile of the customers, their current status, level of awareness, evaluation of the role of dairy cooperative societies, and changes in marketing strategies. The primary data was also collected through interviews held with customers of dairy products. The study also used secondary data in order to ascertain the success in the working of Dairy Co-operative Society. The publications which constituted the secondary sources of information were annual reports of MILMA in Kerala. All data collected was tabulated to facilitate interpretation. Here, percentage analysis is used for analysis of data collection. Statistical device like tables, graphs are also used for the analysis of data. The study was conducted for a period of three months, 1<sup>st</sup> January 2017 to 31<sup>st</sup> March 2017.

### IV. RESULTS AND DISCUSSION

#### Sample Profile

With regards to age classification of respondents, majority of respondents (70 percent) belonged to the category of Below 30 age group. 12 percent of respondents belonged to the category Above 50 age group and 10 percent belonged to the category 41-50 age group. With regard to educational qualification of the respondents, majority of the respondents (34 percent) belonged to the category of Graduate level. 28 percent of respondents belonged to plus two and 26 percent of respondents belonged to post graduate level. With regards to occupational classification of respondents, majority of the respondents (42 percent) belonged to the category of Daily Wages. 24 percent of respondents belonged to the category of professionals and 18 percent of respondents belonged to the category of Business. As far as the income of the respondents, majority of the respondents (32 percent) belonged to the category of Below Rs 15,000. 26 percent of respondents belonged to the category of 15,000-30,000 and 22 percent of respondents belonged to the category 30,000-50,000.

#### Findings

With regard to milk consumption pattern of respondents, majority of the respondents (68 percent) belonged to the category of Daily. 18 percent of respondents belonged to the category of 2-3 days and 10 percent of respondents belonged to the category of monthly users. Regarding the awareness level of respondents about the milk product, majority of the respondents (50 percent) were aware about various milk products available in the market. 46 percent of respondents were fully aware. Regarding the awareness level of respondents about the branded milk product, majority of the respondents (64 percent) were aware of various branded milk products available in the market. 30 percent of respondents were fully aware. Regarding the awareness level of respondents about the certificate standards of MILMA products, majority of the respondents (48 percent) were aware about the certification standards of MILMA products. 38 percent of respondents were unaware. Regarding the awareness level of respondents about the label details of MILMA product, majority of the respondents (44 percent) were aware about the label details of MILMA products. 32 percent of respondents were unaware. Regarding the awareness level of respondents about the quality of MILMA product, majority of the respondents (58 percent) were aware about the quality of MILMA products. 24 percent of respondents were unaware. Regarding the awareness level of respondents about the quantity of MILMA product, majority of the respondents (64 percent) were aware about the quantity of MILMA products. 20 percent of respondents were unaware. Regarding the awareness level of respondents about the pricing pattern of Milma product, majority of the respondents (42 percent) was aware about the pricing pattern of MILMA products. 32 percent of respondents were unaware. Regarding the awareness level of respondents about the safety measures of MILMA product, majority of the respondents (46 percent) were unaware about the safety measures of MILMA products. 34 percent of respondents were aware. Regarding the awareness level of respondents about the major ingredients of MILMA product, majority of the respondents (54 percent) was unaware about the major ingredients of MILMA products. 36 percent of respondents were aware. Regarding the awareness level of respondents about the adulteration of milk product, majority of the respondents (42 percent) was aware about the adulteration of milk products. 32 percent of respondents were unaware.

The Milk Brand preference of respondents show that majority of the respondents (48 percent) preferred MILMA. 42 percent of respondents preferred Amul and 8 percent of respondents' preferred Malanadu. The Ghee Brand preference of respondents show that majority of the respondents (54 percent) preferred MILMA. 40 percent of respondents preferred Amul and 4 percent of respondents preferred Malanadu. The Paneer Brand preference of respondents show that majority of the respondents (46 percent) preferred Amul. 46 percent of respondents preferred MILMA and 8 percent of respondents preferred Malanadu. The Butter Brand preference of respondents show that majority of the respondents (52 percent) preferred Amul. 40 percent of respondents preferred MILMA and 6 percent of respondents preferred Malanadu. The Curd Brand preference of respondents show that majority of the respondents (60 percent) preferred MILMA. 26 percent of respondents preferred Amul and 12 percent of respondents preferred Malanadu. The Cheese Brand preference of respondents show that majority of the respondents (50 percent) preferred Amul. 46 percent of respondents preferred MILMA. The Lassi Brand preference of respondents show that majority of the respondents (68 percent) preferred MILMA. 22 percent of respondents preferred Amul and 14 percent of respondents preferred Malanadu. The Peda Brand preference of respondents show that majority of the respondents (68 percent) preferred MILMA. 20 percent of respondents preferred Amul and 8 percent of respondents preferred Malanadu. The Flavoured Milk Brand preference of respondents show that majority of the respondents (60 percent) preferred MILMA. 28 percent of respondents preferred Amul and 8 percent of respondents preferred Malanadu. The Kulfi Brand preference of respondents show that majority of the respondents (52 percent) preferred Milma. 22 percent of respondents preferred Amul and 4 percent of respondents preferred Jeeva. The Sambaram Brand preference of respondents show that majority of the respondents (76 percent) preferred MILMA. 16 percent of respondents preferred Malanadu.

Quality is a factor which influences the respondents to buy dairy products. Majority of respondents (56 percent) belonged to the category strongly agree regarding the importance of quality. 40 percent respondents belonged to the category agree and 2 percent respondents belonged to the category disagree. Easy Availability is a factor which influences the respondents to buy dairy products. Majority of respondents (54 percent) belonged to the category strongly agree. 30 percent respondents belonged to the category agree and 14 percent respondents belonged to the category neutral. Price is one of the factors, which influence the respondents to buy dairy products. Majority of respondents (38 percent) belonged to the category strongly agree. 32 percent respondents belonged to the category agree. Dealer Relationship is one of the main factors, which influence the respondents to buy dairy products. Majority of respondents (34 percent) belonged to the category disagree. 30 percent respondents belonged to the category strongly agree. Attractive packaging is one of the factors, which influence the respondents to buy dairy products. Majority of respondents (40 percent) belonged to the category disagree. 32 percent respondents belonged to the category strongly agree and 18 percent belonged to the category Neutral. Regular Supply is one of the factors, which influence the respondents to buy dairy products. Majority of respondents (46 percent) belonged to the category disagree. 38 percent respondents belonged to the category strongly agree and 14 percent belonged to the category neutral. Majority of the respondents (42 percent) prefer Pasteurized Standardised Milk. 20 percent of respondents prefer Pasteurized Toned Milk and 18 percent of respondents prefer Smart Milk. Brand Loyalty is the tendency of Consumers to continue buying the same brand of goods. With regards to brand loyalty of respondents, majority of the respondents (40 percent) belonged to the category 4 years. 28 percent of respondents belonged to the category of 2 years and 24 percent of respondents belonged to the category 1 year. With regards to respondent's source of awareness about the product, majority of respondents (36 percent) were aware about the product through word of mouth. 22 percent respondents were aware about the product through advertisement. 18 percent respondents were aware about the product through the dealers. With regards to respondent's Ice cream preference, majority of the respondents (34 percent) preferred Merii Boy. 26 percent of respondents preferred Amul and 22 percent of respondents preferred Uncle John.

It is clear that most of the customers prefer MILMA brand products because of its easy availability. It gets the 1<sup>st</sup> rank of preference. The next reason for the preference is its reliability and purity. Customers ranked regular supply as the 3<sup>rd</sup> main reason for its purchase. The study shows that the main reason for the non-preference of MILMA products is its irregularity in supply. Also, customers say that the products are not fresh. The third reason is that the customers do not like its taste and smell. Regarding the question about how MILMA Dairy Products differs from Other Dairies, majority of respondents (40 percent) belonged to the category Hygiene. 25 percent respondents belonged to the category quality and 20 percent respondents belonged to the category packing. The MILMA dairy products are innovative in terms of product development. Most of the respondents (64 percent) responded Yes. 36 percent is under Category No. The MILMA dairy products are superior in packaging. Most of the respondents (60 percent) is under the category Yes. (40 percent) is under category No. Regarding the response of MILMA towards handling consumer’s complaint, majority of the respondents (40 percent) belonged to the category good. 36 percent of respondents belonged to the category of average. Regarding the response of MILMA towards innovation in market, majority of the respondents (52 percent) belonged to the category good. 24 percent of respondents belonged to the category of average. Regarding the price comparison of MILMA products against Milk & Milk products supplied by local residents, majority of the respondents (52 percent) belonged to the category rarely. 20 percent of respondents belonged to the category of frequently. Regarding the price comparison of MILMA products against Milk & Milk products supplied by other companies, majority of the respondents (42 percent) belonged to the category rarely. 32 percent of respondents belonged to the category of frequently.

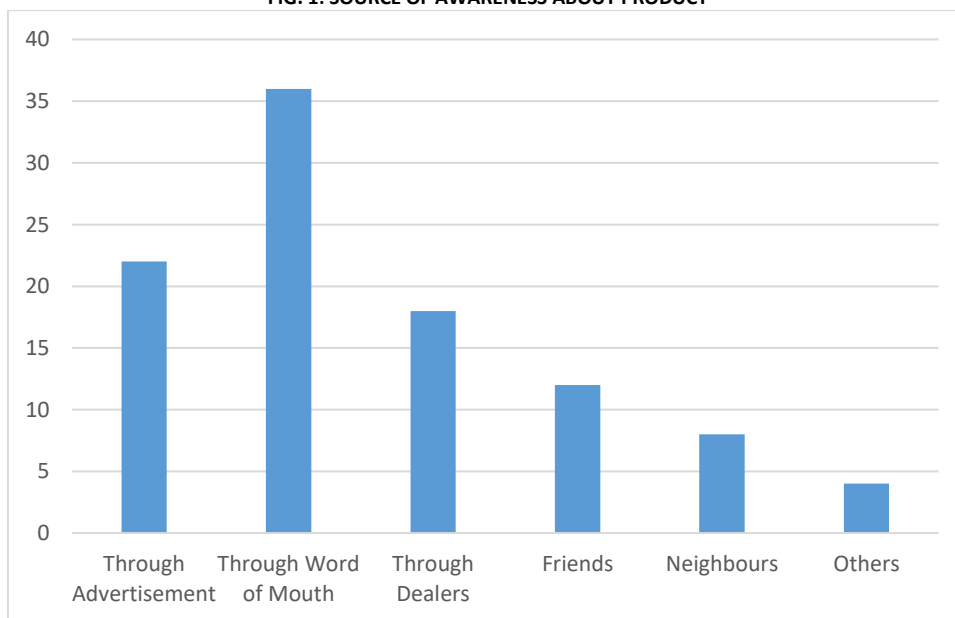
TABLE 1: AWARENESS LEVEL OF RESPONDENTS

Level of Awareness	Fully Aware	Aware	Unaware	Total
About Milk Products	46	50	4	100
About Branded Milk Products	30	64	6	100
About certificate standards of Milma Products	14	48	38	100
About label details of Milma products	24	44	32	100
About quality of Milma products	18	58	24	100
About quantity of Milma products	16	64	20	100
About pricing pattern of Milma products	26	42	32	100
About safety measures of Milma product	20	34	46	100
About major ingredients of Milma	10	36	54	100
About adulteration of milk products	24	42	32	100

Source: Primary Data

SOURCE OF AWARENESS ABOUT PRODUCT

FIG. 1: SOURCE OF AWARENESS ABOUT PRODUCT



Source: Primary

V. LIMITATIONS AND DIRECTION FOR FUTURE RESEARCH

The sample size is limited to 100 respondents which constitute a small part of the total. The study is only concentrated in Ernakulum MILMA dairy, so this result may not cover the entire details of MILMA in Kerala. Some respondents are biased in answering the questions. The study was also conducted over the course of 3 months; therefore, there was not enough time to conduct a proper study. In the future, I hope to expand this project into different districts to widen the data collected in order to get more accurate results.

VI. CONCLUDING REMARKS

Kerala Co-operative milk marketing federation (KCMMF) popularly known as “MILMA” was established in 1980, for the successful implementation of “OPERATION FLOOD” in Kerala. Milk co-operative is a form of economic organization in which farmers, willfully and voluntarily, pool their resources on the basis of equality for the advancement of their economic interest. The guiding principle of a cooperative is “self-help through mutual help”. The study was conducted to understand the marketing strategies of MILMA, which helps the company to retain its customers. The study was conducted among 100 respondents. Interview, questionnaire, ranking, percentage analysis etc. was used for collecting data and analyzing it. The study suggests that brand loyalty is the main reason for its success rather than the other factors analyzed. MILMA does not focus much on advertising. The results of this study suggest that MILMA can increase sales through more advertising. MILMA is successful despite its lack of advertising. However, with some creative and persuasive advertising, MILMA should be able to expand its market even further. Also it can boost the market through more retail outlets and franchising. As a whole, MILMA is a leading organization, which can potentially gain more markets and more success in the future.

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**FINANCING SMALL AND MEDIUM SCALE ENTERPRISES BY MICROFINANCE BANKS IN SOKOTO STATE,  
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SOKOTO****ABSTRACT**

*It can be observed that governments in Nigeria-both federal and state levels have launched various programmes aimed at providing access to micro-credit as strategy for promoting the development of SMEs the impact of the credit to SMEs is abysmal. The main thrust of this study is to investigate the effect of microcredit on the growth of SMEs in Sokoto State. The study used stratified and purposeful sampling methods to select 240 SMEs that have received micro-credit and operate for at least ten (10) years. Paired sample t test and regression were used to test hypotheses. It is discovered that after receiving micro-credit the firms have recorded a significant change in the rate of employment. The results also indicate that micro-credit has significant influence on SMEs growth in terms of employment with p-value of 0.004\*\*\* and 0.009\*\*\*. Even though the SMEs in the area have achieved growth, some constraints have been identified to affect the activities of enterprises which include inadequate infrastructure, lack of adequate finance and inadequate professional personnel, lack of conducive business environment among others. This study therefore recommends that Microfinance banks should create awareness and provide finances to SMEs to facilitate their activities. Government should partner with donor agencies to focus attention on the regular training and retraining of the SMEs operators to enhance their skills for rapid growth of their enterprises.*

**KEYWORDS**

SMEs, microfinance banks, micro-credit, growth.

**JEL CODES**

G21, G29, L25, L26.

**INTRODUCTION**

In fact, the concept of microfinance is not new. Global Envision (2006) noted that many savings and credit groups operated for centuries and they include; the "chit funds" in India, "tandas" in Mexico, "arisan" in Indonesia, "cheetu" in Sri Lanka, "pasanaku" in Bolivia and "susus" of Ghana among others. It has been noticed that formal credit and savings institutions for the poor have been in existence for centuries providing customers, who were traditionally neglected by commercial banks-with financial services through cooperatives and development finance institutions.

Global Envision (2006) confirmed that one of the earliest and long-lived micro-credit organizations providing small loans to the poor with no collateral was the Irish Loan Fund system, which was initiated in the early 1700s. The idea began slowly but in the 1800s had become a widespread institution of about 300 funds all over Ireland. Their principal purpose was to make available to the poor small loans with interest for short periods. At their peak, they were granting loans to 20% of all Irish households annually. With the successful operation of Grameen Bank in Bangladesh, the institution of micro-lending was revolutionized in 1976 and became the source of inspiration for the establishment of similar institutions in many countries (Global Envision, 2006; Vanroose, 2007 and Dignity Fund, 2005). Okoye (2006) however, observed that more than 1,200 micro-finance institutions were later established in Bangladesh and supplied microfinance services to about 13 million clients.

Muhammad and Hassan (2008) argue that what precipitated the proliferation of microfinance institutions in many countries was primarily the dismal performance of the conventional finance sector. They submit that this development has led to more than 7000 micro lending organizations providing loans to more than 25 million poor individuals across the world and the vast majority of them, women.

Just like in other countries, according to CBN (2005), the practice of microfinance in Nigeria has been culturally-rooted and dates back to several centuries. Mejeha and Nwachukwu (2008) pointed out that before the emergence of formal microfinance institutions, informal microfinance activities flourished all over the country. Informal microfinance is provided by traditional groups that work together for the mutual benefit of their members. These groups provide savings and credit services to their members. The informal microfinance arrangements operate under different names such as; *esusu* among the Yorubas, *etoto* for Igbos and *adashe* for the Hausas. The traditional microfinance institutions provide access to credit for the rural and urban low-income earners. They are mainly of the informal Self-Help Groups (SHGs) or Rotating Savings and Credit Associations (ROSCAs) types. Other providers of microfinance services include savings collectors and co-operative societies. Generally, the informal financial institutions have limited outreach due primarily to paucity of loanable funds (CBN, 2005).

To mitigate the aforementioned constraint of poor access to financial services including micro-credit among micro, small and medium enterprises, according to Anyanwu (2004), Nigerian government had in the past, initiated a series of publicly-financed micro/rural credit programmes and policies. More recently; precisely in 2005, the desire to spur SMEs growth as well as that of the economy the government launch the microfinance policy. The policy provides for the establishment of microfinance institutions (MFIs) also known as microfinance banks (MFBs) to cater for the financing needs of small and micro enterprises as well as other non financial services (CBN, 2011). Oni, Imam and Ormim (2012) highlight that information disclosed on the CBN website shows that since the launch of the policy, not less than 900 microfinance institutions (though some had their license revoked) have been established and registered with the regulatory authority in Nigeria. With the spring up of such a large number of institutions in pursuance to the microfinance objectives, it is necessary for an impact assessment to be made to determine how these institutions have influenced the development of SMEs in the country. It is against this backdrop that this study seeks to assess the effect of microcredit on SMEs growth in Sokoto State.

**LITERATURE REVIEW**

Firm growth has been described as the rate of expansion as measured by sales volume experienced by a firm during its initial years. Simply puts, firm growth can be defined as an increase in a firm's size. Tihula (2004), states that firm growth can be measured, for example, by sales volume, increase in the number of employees, increase in number of customers, subcontractors, products or innovations and increase in market share. He specifically suggested (in his study) that the concept can be measured by sales volume (increase in sales by a given percentage) and increase in the number of employees.

According to Sun (2004), the concept of enterprise growth connotes the developmental process of an enterprise with a sustained balanced and stable growth of total performance level (including output, sales volume, profit and asset growth) or keep recording enhancement of total performance and the stage spanning of developmental quality and level.

Nitcher and Goldmark (2005) defined firm growth as an increase in the number of employees overtime. They argued that the majority of studies on small enterprise growth employ this metric. Some scholars use alternative metrics such as revenue or asset growth. The majority of researchers studying small business growth in developing countries rely on employment growth because it is often extremely difficult to obtain reliable financial data from small firms. Nitcher and Goldmark (2005) stressed that even when Micro and Small Enterprise owners do not keep written records they can usually recall their number of employees. Vega (2010) posited that the growth of MSEs can be measured in different ways, such as growth in sales, increase in the number of workers or increment in profits. According to McPherson (1996) "growth in terms of sales or profits might be preferable to a labour-based measure from an accuracy standpoint", given that measurement is not an obstacle and data is available.

Divergent views on what specifically constitute the dimension and nature of enterprise growth linger among micro-economists. According to Mao (2004), concept of enterprise growth is best analyzed in the perspectives of prime property of enterprise, dynamic property and unification of quantity and quality of specific variables.

In respect of measuring an enterprise growth, Miroslav (2010) highlights that there is little agreement in existing literature on how to measure growth and scholars have used a variety of different measures. These measures include, for example, growth of sales, employees, assets, profits, equity, and several others (Davidson & Wiklund, 2000). Moreover, the time span over which growth is analyzed in the literature varies considerably ranging from one to several years. Again, growth has been measured in absolute or relative terms. Perhaps the most common means of operationalizing firm growth are through relatively objective and measurable characteristics such as growth in sales turnover, total assets and employment growth.

These measures are relatively uncontroversial (methodologically) and data tend to be easily available, thereby increasing the scope for cross-study comparisons (Freel & Robson, 2004). Naqeeb (2012) posits that number of researchers have analyzed firm performance through various indicators such as; growth in sales, growth in employment, return on assets (ROA), age of firm, firm profitability, and others (Sleuwaegen & Goedhuys, 2002; Robson *et al.* 2008 and Rogerson *et al.* 2000; Salojarvi & Furu *et al.* 2005). In addition, Saleh and Ndubisi (2006) measured firm performance by using labour and capital productivity for Malaysian SMEs and suggested that barriers to SMEs should be removed. These barriers such as; low human capital, insufficient funds and lower firm R&D undertaking, affect the growth of SMEs. It should be noted that growth and performance are used interchangeably by researchers. Some consider growth as a performance measure can be ascertained through change in the structure or capacity of an enterprise. Even though in several occasions scholars describe firm performance as ability of firm to achieve growth, other measures of performance go beyond a mere growth. Firm performance is measured in terms of survival, scale up to another category or enterprise development.

According to Sebastad and Walsh (1995), there is a different range of indicators of growth of SMEs but, for the purpose of her study, Abdul (n.d.) proposed to use the income of the MSEs, accumulation of business assets, revenue and employment as an indicator of growth for the enterprises.

Delmar *et al.* (2003) argues convincingly that since there appears to be no one best measure of firm growth, as well as no one best composite measure of firm growth, it would be advantageous to explore the use of many different growth measures in a study of firm growth. The use of multiple measures of firm growth would likely provide a more complete picture of any empirical relationships as well as provide a way to test the robustness of any theoretical model to misspecifications in the dependent variable. The use of multiple measures also offers the opportunity to use a measure optimized to the study's specific purposes while allowing comparisons with the results of previous studies using other growth measures.

On the reasons for enterprise growth, Papadaki and Chami (2002) construed that the relatively small body of business literature dealing with the reasons for small firm growth can be categorized into two schools of thought. The first adheres to an organizational life cycle perspective, which sees growth as a natural phenomenon in the evolution of the firm. The second school of thought sees growth as a consequence of strategic choice. In either case, the attributes of the business owner, organizational resources and environmental opportunity are crucial in expanding the firm or in overcoming the barriers to the evolution of the firm from one stage to the next. Indeed, a distinction can be made between a business owner and an entrepreneur; the latter being a "special individual committed to the growth of his/her business. Papadaki and Chami (2002) cited Sexton and Smilor (1997) and Carland *et al.* (1984), who argued that for some authors, "growth is the very essence of entrepreneurship," and commitment to growth is what primarily distinguishes small business owners and entrepreneurs.

Storey (1994) adumbrated number of factors influencing the growth of small enterprises as the entrepreneur/resources, firm itself and the strategy used by the entrepreneur. However, King and McGrath (2002) in Bowen (2009) argue that education is one of the factors that impact positively on growth of firms. They further stated that those entrepreneurs with large stocks of human capital, in terms of education and (or) vocational training, are better placed to adapt their enterprises to constantly changing business environments. Bokea, *et al.* (1999) argues that infrastructure as it relates to the provision of access roads, adequate power, water, sewerage and telecommunication has been a major constraint in the development of SMEs.

Mao (2004) posits that growth is used to describe a developmental process of an enterprise from small to big and from weak to strong. The concept of development is broader than that of growth, and includes not only the growth of a firm but also the generation stage of growing out of nothing, before growth and the periodic process of the stages, the cycle process going round and round. Mao (2004) further describes the dimensions of enterprise growth as prime property of enterprise growth, dynamic property of enterprise growth and enterprise growth as the unification of quantity and quality.

Empirical evidences shows that employment is one of the important indices accentuating business growth. Though, argument on which specific factor determines SMEs growth is inconclusive. But myriad of studies confirm that access to finance play significant role in firm growth particularly through increased employment. In a survey conducted using a panel data technique, Brown *et al.* (2004) established that access to external credit increases the growth of both employment. But sales and taxes appear to constrain growth. However, data on this research conducted in Bolivia also suggested that entrepreneurial skills have little independent effect on growth once demand conditions are taken into account. Again, in a separate study, Jennifer and Gregory (1999) examined the impact of credit (usually upon a single assisted enterprise) on employment and findings of the research show a positive relationship between the variables. Results of the study indicate that when external finance is accessed by small firms and the amount utilized in expansion, more workers would be employed to handle the activities production and distribution. However, in a study conducted by Kuzilwa (2005), results show that a significant increase in the output and employment generation was resulted from access to micro-credit. The study also supported the fact that access to credit is not the only parameter for success because there are several other factors that may lead to success or may create hindrances; like infrastructure problems, competition in the market and so on.

**RESEARCH METHODOLOGY**

The study is a cross-sectional survey that examines the relationship between access to micro-credit and SMEs growth. It examines whether or not micro-credit affects the growth of SMEs in terms of employment. Rate of employment constitute the measure of business growth (proxy the dependent variable). The credit size, interest rate and loan tenor serve as independent variables. Enterprise age has been introduced to control the relationships between independent variables and the dependent variable SMEs growth.

Questionnaire and structured interview constitute the major sources of data for this study. Data have been collected through questionnaire to measure relationship between the two variables. The study also used online publications, journal articles, the Bullion-CBN publication and microfinance newsletters for literature review. Records available in the banks under study have been used to capture the number of small and medium scale enterprises benefited from microfinance banks' credit since inception.



Business growth is the dependent variable proxied by change in rate of employment. The focus of this study is to assess how the amount received as micro-credit, interest charged on loan and loan tenor i.e period for repayment affects the proxy of dependent variable. Data collected from the SMEs were structured in panel form and tests were conducted to examine some relationships.

The study used open-ended questions in the questionnaire administered to SMEs owners/operators to measure the change in the components of dependent variable after obtaining credit. Interview was also used to get a broader view of SMEs growth in the area.

The population of this study is the total number of SMEs that have been existing since 2003 and also benefited from microfinance banks' credit in Sokoto State. A total of seven thousand two hundred and seventy (7,270) SMEs across the banks were the beneficiaries which served as the population of the study. Due to the difficulty in covering the entire population, considering their large number and also time constraint, fair representation of the population becomes imperative.

Stratified and purposeful sampling techniques were adopted for this study. The stratified nature of small businesses in the area prompted the choice of this technique. Stratified sampling, according to Moser (1968) in Muhammad (2009) involves first; the division of the population into a number of strata and secondly, selecting a random sample within each stratum. This will make the various strata in the population to be represented in the sample. Thus, this study classifies SMEs into distribution, agriculture, service, manufacturing and processing. Out of the sample two hundred and forty (240) SMEs, forty eight (48) were selected randomly from each of the five (5) sectors. However, in some situations, information about the existence of SMEs with required characteristics were supplied by bank officials (managers and marketers) or other SMEs operators. In that case, the research purposely met the respondents either at the business location, at home or in the bank and this warranted a purposeful sampling.

Data for this study were basically used the primary source of data. The research used the primary source of data to gather information to make a comparative analysis of the performance of the enterprises before and after their access to micro-credit. The research also used Focus Group Discussion for descriptive information to complement the questionnaire. The primary sources are largely the major sources of data for the research.

The instruments used for the collection of data for this study are basically questionnaire and interview for the SMEs owners/managers. Use of questionnaire in this study is simply because of the convenience in coding the information for quantitative analysis. Questions in this questionnaire are presented in both open-ended and close-ended formats.

**DATA PRESENTATION AND ANALYSIS**

**TABLE 1: REGRESSION RESULTS ON MICRO-CREDIT AND SMES GROWTH IN TERMS OF EMPLOYMENT**

Variable	RREG			FE			RE		
	Coef.	Std. Err.	P >   t	Coef.	Std. Err.	P >   t	Coef.	Std. Err.	P >   z
EMPLOYMENT									
CREDSIZE	.2518284	.0320829	0.000***	.0299619	.0262437	0.255	.0691244	.023795	0.004***
INTR	-.6423717	.1673388	0.000***	-.067202	.06933156	0.337	-.095832	.0687566	0.163
TEN	.5400881	.2540036	0.034	.2640568	.1065634	0.014**	.2746923	.1049963	0.009***
ENTAGE	.1449952	.1070137	0.176	.5968353	.0744042	0.000***	.480345	.0670309	0.000***
INIT	-.1501317	.1209862	0.215	-.154431	.0616734	0.013	-.1187723	.0594232	0.046
_cons	-1.276513	.7141491	0.075	-.533222	.3647511	0.145	-.7766711	.3545029	0.028
R <sup>2</sup>	0.1418			0.0094			0.0401		
Rho				.9580692			.95208275		
F Statistic				0.0000					
Wald chi2							0.069		
Hausman				0.0002					
Breusch-Pagan (LM)							0.0000		

Source: Stata 12.0 outputs

Note: \*\*\*, \*\*, \* denote 1%, 5% and 10% significance levels respectively

Table 1 shows relationship between micro-credit and employment growth of the SMEs. It is very conspicuous that credit size is significantly related to the employment growth in OLS regression with  $\beta$  coefficient of 2518284, standard error of .0320829 and p value of 0.000. The relationship between the two variables is significant at 1% significance level. Interest rate and employment are also significantly related at 1% level of significance with  $\beta$  coefficient of -.6423717, standard error of .1673388 and p value of 0.000. The R Squared valued at 0.418. In the second column of Table 5.15 the fixed effects show  $\beta$  coefficient of .2640568, standard error of .1065634 and p value of 0.014 with R Squared of 0.0094 and intra-class correlation of 96%. The results indicate that relationship between loan tenor and employment growth is significant at 5% significance level. The Hausman test presents Prob>chi2 is equal to 0.0002.

In the third column of the table, the random effects estimates show that  $\beta$  coefficient is .0691244, standard error is .023795 while the p value is 0.004 and this indicates that size of credit and employment growth of the SMEs have significant relationship at 1% significance level. Not only credit size, the table also shows that the loan tenor has significant relationship with employment growth at 1% level of significance with  $\beta$  coefficient of .2746923, standard error of .1049963 and p value of 0.009. Furthermore, R square is 0.0401; intra class (rho) is .95208275 and the Wald Chi2 is 0.069 while the Breush Pagan LM test shows Prob > chibar2 = 0.0000. Based on the results from the random effects model the null hypothesis that significant relationship does not exist between microfinance banks' credit and SMEs employment growth is rejected.

**DISCUSSION OF FINDINGS**

Saeed (2009) posits that a firm's financial resource endowment is a vital determinant of firm growth. Limmuel (2009) also argues that having access to finance gives SMEs the chance to develop their businesses and to acquire better technologies for production, therefore ensuring their competitiveness. The micro-credit effect is relevant for SMEs in Sokoto State because those enterprises that have accessed credit were able to record significant change in their capacity to generate employment and record significant increase in the percentage of their market share. This result is in consonance with results obtained by Singh (2009), Alam and Miyagi (2004), Bekele and Zeleke (2008), Fasehun and Bewayo (2009), Babagana (2010), Quaye (2011), Oni *et al.* (2012) and Moruf (2013).

According to Pecking Order Theory, when the sums so borrowed are invested by the firm and the investment has proved a success, additional assets are created, which can again be used as security for further borrowing. Thus, accessibility to finance is expected to positively influence the availability of factors of production such as land, labour, capital, equipment and machinery, subject to the constraints of asymmetric information and high cost of capital. All things being equal, increased quality and quantity of factors of production available to a firm will generate more production and through effective and efficient marketing strategies enhance a firm's performance. Availability of finance also enhances bulk purchases of productive resources, which decrease the unit cost of production as a result of economies of scale. The reduction in unit cost of production is also expected to generate an increase in profit. Thus, improved firm performance ensures higher profits, higher growth in sales and employment and wealth maximization for the owners. Access to micro-credit made it possible for the SMEs in Sokoto State to have increased capital base, acquire more productive assets and enjoy economies of scale in production and incur relatively low cost of production compared to the pre-loan period. This resulted to employment of marginal labor and consequently market expansion. Similar results were obtained in the studies of SMEs who have accessed micro-credit from microfinance institutions by Sebstad and Walsh (1991), Mosley (1996) Brown *et al* (2004).

Olutunla and Obamuyi (2008) argue that the growth of SMEs is not just dependent on accessing bank loan but accessing the right size of loan at the right time. In this study, three variables represent terms of loan, which includes; credit size, interest rate and loan tenor. The question is; how do these affect SMEs growth? The Pecking Order Theory explained that interest rate being cost of obtaining credit is inversely related to the profitability of the firm, since rising interest will force producers to incur higher costs of production. Akisimire (2010) observed that MFI-SME relationships and MFIs credit terms are very crucial in determining



SME performance, Fagiolo and Luzzi (2006) established that small size of loan, charge high interest rates and short loan period offered by microfinance institutions inversely affects SMEs growth.

Results from this study indicate that age of the entrepreneur is positively related to growth of the SMEs. Similar results were found in researches such as Olutunla and Obamuyi (2008) and Olusola (2012). Jovanovic (1982) gives reason why age affects firm growth by saying only as the years pass do firm owners and/or managers begin to be more efficient at choosing the best of alternative investment opportunities. Based on this argument, Jovanovic (1982) concludes that at more advanced stages of their life-cycle firms are more able to obtain higher rates of financial performance. Aw (2002) further clarifies that firm age and productivity of SMEs have a positive relationship because older firms have experience in production and have already been exposed to competition from other firms. If reasonable size of credit is given to the SMEs their ability to expand their activities and achieve growth through increase penetration into the market is expected. Even though in some occasions serious competition and other exogenous factors affects the activities of firms to achieve expansion of the share of the market even with the increase in finance resources. Again, the interest rate also affects firm performance where his interest adds to cost of production and thereby affects the profitability of the borrowers. Also, the loan tenor has significant relationship with employment growth because when loan is administered to SMEs and adequate repayment period is given, the enterprises use the funds for a long duration which will help in keeping the working capital at reasonable level and enhance the capacity to acquire required inputs and enjoy sustained liquidity. According to Fagiolo and Luzzi (2006) if adequate loan repayment period is given the SMEs can manage their financial resources with less stress, which can be fundamental for taking advantage of all good investment opportunities that arise. Pedro (2013) argues that, in these circumstances, access to debt on relatively beneficial terms may be crucial for efficient management of financial resources in small firms. In this results, the size of credit and loan tenor are significant, even age of the enterprises is also significantly related to employment growth of the SMEs.

## CONCLUSIONS

Even though, the SMEs in Sokoto State who have accessed credit are said to have improved it is observed that the type of growth they have recorded is not vertical since none of them scaled up to the status of a large enterprise. The Problems affecting growth of the enterprises includes; lack of business support services, poor and inadequate infrastructures, lack of conducive business environment, lack of adequate finance and lack of qualified professionals at the disposal of SMEs. Other constraints to firm growth are competition, poor sales, credit sale and bad debt.

Micro-credit terms such as loan size, interest rate and loan tenor have not influenced the turnover of SMEs. The age of the enterprises is seen to be influential in that relationship. The size of credit is not enough, the interest rate is high and the tenor of the loan is also short to enable the enterprises facilitate the increase of their turnover.

In contrast to the above scenario, the sizes of credit and period given to the SMEs to repay the loan have contributed to the employment growth. It implies that microfinance programme can serve as means of enhancing business growth and job creation for poverty reduction in less developed economies.

## RECOMMENDATIONS

1. Governments have critical role to play in the provision of adequate infrastructure to address the problems encountered by SMEs in the area. In Brazil, government support the activities of SMEs by providing industrial areas, by linking those areas with roads, electricity, water, energy and other facilities to make business easy. In Nigeria, governments at all levels should venture into provision of adequate infrastructures for SMEs operation and enhanced growth. This serves as a strategy for underdeveloped economies to boost economic activities through proliferation of SMEs, which will in turn help government to create jobs and reduce poverty.
2. SMEs associated lack of business support services with poor growth of their enterprises, on that basis government should continue to partner with donor agencies to provide regular training and retraining and business counseling to SMEs operators in order to enhance growth of the SMEs. Training and retraining of SMEs operators will be of immense importance to the businesses going by the result of this study where majority of the owners/managers are having lower education qualification. The improved quality of SMEs operators will facilitate proper management of the enterprises and rapid growth, which impact on the ability of the enterprises to contribute significantly to economic growth and development.
3. Conducive business environment is also said to be critical factor in the enhancement of growth of SMEs. In Nigeria, issue of insecurity and corruption affects smooth running of businesses. Government should focus its attention on the provision of secured business environment in which SMEs can operate.
4. State government should establish a Business Incubation Centre that will house the SMEs that have graduated from skill acquisition programme of the State government in order to support their take up activities; especially the technology based SMEs.

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## THE DYNAMICS RETURN OF CLEAN AND RENEWABLE ENERGY SECTOR AND ITS RESPONSE ON THE BUSINESS CYCLE AFTER THE KYOTO PROTOCOL

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### ABSTRACT

*The purpose of this study is to analyze the world energy consumption and the impact of the world economy to the clean and renewable energy stock return. This study used historical secondary data from The World Bank and from United States of America's stock market. The methodology in this study consists of energy mix analysis, growth analysis, correlation analysis, different test, and event study analysis. The result showed that after the Kyoto Protocol, the portion of clean and renewable energy in the energy mix has increased 1.47% within 11 years. Clean and renewable energy is not affected by the global financial crisis of 2008. China is the fastest growth of clean and renewable energy consumption in the world. S&P Global Clean Energy Index has a modest positive correlation with S&P Global Oil Index, negative correlation with S&P 500, and negative correlation with GDP per capita. There is a difference between the average S & P Clean index before the crisis and after the crisis. The average S&P Clean index before the crisis was higher than after the crisis. There is no significant difference of average abnormal return before and after the Conference of Parties (COP) 21st in Paris.*

### KEYWORDS

kyoto protocol, clean and renewable energy, macro economy.

### JEL CODE

Q43

### 1. INTRODUCTION

Energy is needed for human life and plays a central role in the global economy. The most commonly used energy sources are energy sources derived from fossils such as coal, petroleum, and natural gas. For more than 100 years fossil energy has become the main source of energy driving the world economy and industry. Global warming is happening. The temperature of the planet increases from year to year. According to environmental experts, carbon dioxide (CO<sub>2</sub>) is the cause that traps heat in the Earth's atmosphere that drives the planet's temperature rise, which we have known as the greenhouse effect. This carbon dioxide is produced from fossil fuel combustion processes such as coal, natural gas and oil plus deforestation due to deforestation, especially in the tropics. The world of the twenty-first century faces a major challenge to managing the economic transformation of carbon-intensive energy into an economy dominated by clean and renewable energy. The reality of global climate change is the occurrence of global warming caused by the increasing of CO<sub>2</sub> emissions levels in the atmosphere drives some countries in the world dramatically cut the amount of fossil fuel consumption.

The Kyoto Protocol is a world-wide meeting of countries to discuss global issues concerning Earth's climate change caused by increasing levels of greenhouse gas emissions. The Kyoto Protocol, initiated by the United Nations Framework Convention on Climate Change (UNFCCC), is the 3rd Conference of Parties (COP) of a series of COPs until the 21st COP in Paris on 2015. The Kyoto Protocol was adopted on 11 December 1997 in Kyoto, Japan. The outcome of the conference is then referred to as the Kyoto Protocol, which is subsequently legally binding for participating countries to reduce carbon dioxide, methane, nitrogen oxide, sulfur hexafluoride, hydro fluoro (HFC), and perfluorocarbon (PFC) emissions. The outcome of the agreement is that developed and developing countries are willing to work together to reduce greenhouse gas emissions. The Kyoto Protocol entered into force in 2005 and ends in 2012. The eight-year extension of the Kyoto Protocol from 2013 to 2020 is a decision set out in the Doha Amendment as a result of the 18th Climate Change Conference in Doha, Qatar in 2012.

Stock price fluctuations indicate the law of supply and demand in the capital market. For investors, the high demand for products produced by a company shows a good prospect for the company's growth in the future so that it also affects the stock price of the company. In terms of stocks traded on the stock exchange, the higher the return generated from a stock then the stock price will be higher. Along with changes in economic patterns and world energy consumption, companies engaged in the field of clean energy and renewable more established to meet the world demand for clean and renewable energy. The index of clean and renewable energy stock prices began to be widely made after the Kyoto Protocol in several major stock exchanges in the World while in the Indonesia Stock Exchange has not been made to date.

British Petroleum (BP) routinely annually releases data and reports on energy including the amount of world energy consumption. Classification of energy is divided into two major groups namely fossil energy (fossil energy) which consists of petroleum (oil), coal (coal), and natural gas (natural gas). The second group is clean and renewable energy, which consists of nuclear, hydro and other renewable energy.

Research on stock prices, stock returns, or stock price indexes of various sectors has been widely done with mixed results. Artha (2014) in the results of his research shows that book value per share (BVS), price to book value (PBV), debt to equity ratio (DER), stock price trends, BI rate, world oil prices, and rupiah exchange rate to the share price of agricultural sector at 1% level. The results of research conducted by Kurniadi (2013) showed that based on REM analysis, only MVARET and Q-TobinRET variables have a significant positive effect on stock returns. EVARET, inflation, exchange rate and dummy crisis have no significant effect on stock

return. Gay Jr. (2008) in his research entitled Effects of Macroeconomic Variables On Stock Market Returns For Four Emerging Economies: Brazil, Russia, India, and China showed that there is no significant influence of macroeconomic variables exchange rate and oil prices to stock returns in four The country.

Kumar (2012) conducted a research entitled The Impact of Macro Economic Fundamentals on Stock Prices Revisited: Evidence from Indian Data. The results show that macroeconomic variables and stock market indices are co-integrated and hence long-term equilibrium relationships exist between them. It is observed that stock prices are positively associated with money supply and industrial production but negatively related to inflation. Short-term exchange rates and interest rates are found to be insignificant in determining stock prices. In the Granger causality sense, macroeconomic variables cause long-term stock prices but not in the short run. There is a two-way causality between production and the price of industrial stocks, whereas the causality of money supply for stock prices, stock prices for inflation and interest rates on stock prices are found.

Barnor (2014) in his research entitled The Effect of Macroeconomic Variables on Stock Market Returns in Ghana (2000-2013) reveals that interest rates and money supply have a significant negative impact on stock market returns. However, exchange rates have a significant positive impact on stock market returns. In addition, the inflation rate did not significantly affect the stock market return in Ghana. Quadir (2012) conducted a research entitled The Effect of Macroeconomic Variables on Stock Returns on Dhaka Stock Exchange and used the Autoregressive Integrated Moving Average (ARIMA) research method. The results show that the influence of treasury bill interest rate and industrial production on stock return is not statistically significant. Although independent variables of both the treasury bill rate and industrial production have been tested in this study, the effects of many macroeconomic variables on stock market indices remain unexplored for different countries.

Becchetti (2011) conducted a study entitled Stock Market Reaction to the Global Financial Crisis: testing for the Lehman Brother's Event using an event study approach. The results show that Investors rationally assign more value to information on each domain rating than affiliation/non-affiliation with social index FTSE KLD 400. Investors seem to find after the incident that the KLD rating provides original information not captured by traditional financial valuation indicators.

Jayanthi (2009) in her research entitled World Transmission Price and Volatility Shares: Empirical Studies Before and After Crisis Subprime Mortgage revealed results that is on the East Asian market, the variability of volatility return that occurs more due to internal factors. While the variability of European stock return volatility is also influenced by the volatility of other European stock returns. The variability of the volatility of American stock returns is absolutely influenced by internal factors. This research uses Vector Auto Regression (VAR) / Vector Error Correction Model (VECM) and Generalized Autoregressive Conditional Heteroskedasticity (GARCH) combination with VAR using software Eviews.

Mulatsih (2009) conducted a study with the title of Capital Market Reaction Analysis on the Announcement of Right Issue at Jakarta Stock Exchange (BEJ), Observation on Return, Abnormal Return, Security Return Variability and Trading Volume Activity. The study used event analysis method with market adjusted model approach. The results showed that stock returns showed significant differences only for before the moment. This identifies the possibility of right issue information being absorbed in the days before the announcement is published. Abnormal Return and Security Return Variability do not show any significant difference. While Trading Volume Activity shows a significant difference for the period of observation before the time and after the announcement. Based on the result of the research, it can be concluded that the capital market does not react to the announcement of right issue, so the efficiency of Indonesian capital market (Jakarta Stock Exchange) could not be categorized in semi strong form.

Generous (2012) in his research entitled Analysis Effect of macroeconomic variables and World Oil Prices on Energy Stock Price Index using multiple linier regression analysis method. The results of this study are industrial production index variables, inflation, SBI rates, exchange rates and world oil prices jointly affect the changes in IHSE. Partially macroeconomic variables affecting IHSE changes are the SBI rate, exchange rate and world oil price.

Up to now, there has never been any previous research on clean and renewable energy stock price indexes. Therefore, this research becomes the first and since the index of clean and renewable energy stock price is not yet available in Indonesia Stock Exchange, the index used is the stock price index of clean and renewable energy existing in the main stock exchange of United States. In addition, it should be further investigated whether the World energy consumption pattern has changed particularly after the adoption and enactment of the Kyoto Protocol in 2005 and what kind of energy has increased more than other types of energy.

## 2. RESEARCH METHODS

The type of data used in this study is secondary data in the form of world energy consumption, fossil energy stock price index, clean and renewable energy stock price index, composite stock price index and daily stock price of some clean and renewable energy companies listed on the main stock exchange in the United States as well as US macroeconomic data. There are two clean and renewable energy stock price indexes, namely S & P Global Clean Energy Index and NASDAQ® Clean Edge® Green Energy Index and two fossil energy stock price indexes are S & P Global Oil Index and NYSE ARCA Oil & Gas Index. In addition, there are 5 shares of clean and renewable energy companies have been selected to examine how the impact of the occurrence of important events during the period 2005 to 2016. The important events related to clean and renewable energy is the global economic and financial crisis of 2007 to 2009 and the conference of parties (COP) held annually.

The five sample of the shares was selected based on the purpose random sampling of the company's shares included in the NASDAQ® Clean Edge® Green Energy Index component thus listed on the Nasdaq stock exchange and selected 5 companies with the largest market capitalization and has been listed in the stock market since 2005. For composite index used the Nasdaq Composite Index. While the macroeconomic variables used in this research is the US macroeconomics as one of the world economic power reflecting the world economy condition are unemployment rate, gross domestic product (GDP) per capita, world oil prices and inflation measured from the consumer price index. These data are obtained from valid and competent sources from Yahoo Finance, Google Finance, Nasdaq, Bloomberg, World Bank, International Energy Agency (IEA) websites and other sources. The periods of time to be researched is for 11 years from 2005 to 2015. Quarterly US GDP data is obtained from the official website of the Federal Reserve Bank of St. Louis, Economic research.

### ENERGY GROWTH AND ENERGY MIX

Fossil energy consumption data as well as clean and renewable energy is processed by using Microsoft Excel to analyze the world's energy mix and distribution patterns of energy consumption per region. Furthermore, the analysis of growth of energy consumption, especially clean energy and renewable world and per regional using Microsoft excel.

### STATISTICAL DESCRIPTIVE ANALYSIS

Descriptive analysis is used to describe the characteristics of stock return in the form of descriptive statistic such as standard deviation, mean value, skewness, kurtosis, maximum value, and minimum value. The stock return value of each stock price index is calculated by using the formula:

$$R = \frac{P_1 - P_0}{P_0} (1)$$

Where R is stock return, P1 is stock market price at the end of day, and P0 is stock market price at the beginning of day.

### CORRELATION ANALYSIS

Correlation analysis was conducted to find out how the correlation between fossil energy consumption with clean energy and the correlation of both with GDP per capita and correlation between clean and renewable energy stock price index, fossil energy stock price index and composite stock price index. The formula of Pearson correlation coefficient value:

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}} (2)$$

Where N is number of pairs of scores,  $\sum xy$  is sum of the items of paired scores,  $\sum x$  is sum of x scores,  $\sum y$  is sum of y scores,  $\sum x^2$  is sum of squared x scores, and  $\sum y^2$  is sum of squared y scores.

### DIFFERENT TEST

Paired-sample T tests were conducted to determine whether there is a difference in the average net and renewable energy stock price index before and after the global economic and financial crisis. The cut off used as a boundary between before and after the global economic and financial crisis was 1st January 2008.



**EVENT STUDY**

The next method of research is event study with the steps of data processing as follows: Calculates actual return during the estimation period and event period. Return of shares is income received from investments in shares consisting of capital gains (lose) plus dividends for companies that distribute them. Calculates market returns daily. Market return is the profit level of all shares listed in the capital market. Market return is represented by the composite index (NCI). NCI shows the stock price index listed on the Nasdaq capital market that can be formulated as follows:

$$Rmt = \frac{NCIt - NCI_{t-1}}{NCI_{t-1}} \quad (3)$$

Where Rmt = market return at time t. NCI t = Nasdaq Composite Index at time t. NCI t - 1 = Nasdaq Composite Index at time t - 1. Calculates the expected return (return) during the event period.

$$E(Ri) = \alpha_i + \beta_i * Rmt \quad (4)$$

Where E (Ri) = expected return,  $\alpha_i$  = coefficient of constant, and  $\beta$  = slope coefficient which is the beta of the stock i. Rm = market return of the market index during the period of the incident. The coefficient of alpha and beta is obtained from the calculation of time series regression equation from daily stock return with market return during the estimation period with dependent variable in the equation is daily stock return and independent variable is market return. Calculating the abnormal return of each share during the period of abnormal return is the difference between the actual return that occurs with the expected return.

$$ARit = Rit - E(Rit) \quad (5)$$

Where ARit = abnormal return of stock i at time t. Rit = stock return i at time t. E (Rit) = expected return of stock i at time t. Calculates the average abnormal return of all shares during the period of the event (event period). An abnormal return test is not performed for each of the securities, but is done in aggregate by testing the average abnormal return of all securities cross-sectioned for each day of the event period.

$$AARt = \frac{\sum_{i=1}^n ARit}{n} \quad (6)$$

Where AARt = average abnormal return of all shares at time t and ARit = abnormal return of stock i at time t. n = number of shares. The last is calculates cumulative average abnormal return (CAAR) which is the average abnormal return accumulation.

**3. RESULTS AND DISCUSSION****ENERGY MIX WORLD**

The share of petroleum consumption in energy mix for 11 years decreased while coal and gas were relatively stable. The share of nuclear energy in energy mix also decreases while hydro is relatively stable. Only other clean and renewable energies are increasing. During the period of 2005 - 2015, there was a decrease in the portion of fossil energy and on the other side the increase of clean and renewable energy portion but the second portion, change was still very small at 1.47% for 11 years. Within the fossil energy group there is a decrease in the share of consumption in petroleum and is replaced by an increase in the share of coal and natural gas. While in the clean and renewable energy group, nuclear energy has decreased sharply, especially starting in 2011 due to the Fukushima incident and the radiation issues that are harmful to life. Water energy (hydropower) is relatively stable and slightly increased every year. The decline in the nuclear portion was replaced by an increase in the share of clean and other renewable energy consumption, which reached 2.02% for 11 years.

**WORLD ENERGY CONSUMPTION DISTRIBUTION PATTERN**

The pattern of distribution of world energy consumption over the 11 years period (2005 - 2015) shows that the region or countries with the largest amount of energy consumption are countries in Europe and Eurasia followed by China, US and Asia Pacific countries. Europe and Eurasia are areas with the largest amount of energy consumption for both fossil energy and clean and renewable energy. The amount of consumption of fossil energy groups of US and Eurasian countries of Europe decreased while the rest of the world increased. For clean and renewable energy groups in all regions of the World has increased. China is the fastest country in increasing the amount of clean and renewable energy consumption. The Eurasian and Eurasian regions are listed as the region with the largest clean renewable energy consumption in the World followed by the United States and China over the period 2005-2015. Since 2005, the number of clean renewable energy consumption in China has always increased until starting in 2014 could exceed US. China's clean and renewable energy consumption in 2014 and 2015 is larger than the US and is the second largest in the world after Europe Eurasia. The main driver of increased clean energy consumption and renewable energy in China is the use of hydro energy as a large-scale power plant in various regions in China.

**GROWTH OF CLEAN AND RENEWABLE ENERGY CONSUMPTION**

Almost all types of energy experienced a negative growth (decrease) in consumption in 2009. This happens because in 2008 and 2009 there was a global economic and financial crisis that was preceded by the financial crisis in the United States. The global economic crisis that occurred in 2008 actually began in the United States economic crisis as a result of subprime mortgage (subprime mortgage) which then spread to other countries around the world, including Indonesia. This shows the dominance of US Dollar currency and the influence of US economic condition on the world economy. One interesting thing is only the other clean and renewable energy was not affected by the crisis and still experiencing increased growth. Other clean and renewable energy (other than hydro and nuclear) include wind energy, solar energy, geothermal energy and biomass.

Especially for nuclear energy, both from the amount of consumption each year and from the portion in the energy mix looks declining. In terms of growth, nuclear energy experienced a sharp decline in 2011 and 2012. This is due to the impact of the explosion of nuclear reactor explosion in Fukushima. The Fukushima Daiichi nuclear disaster is a barrage of device failures, nuclear leakage and radioactive material release at the Fukushima Nuclear Power Plant I, caused by the Tohoku earthquake and tsunami of March 11, 2011. This nuclear disaster was the worst nuclear disaster since the Chernobyl disaster of 1986.

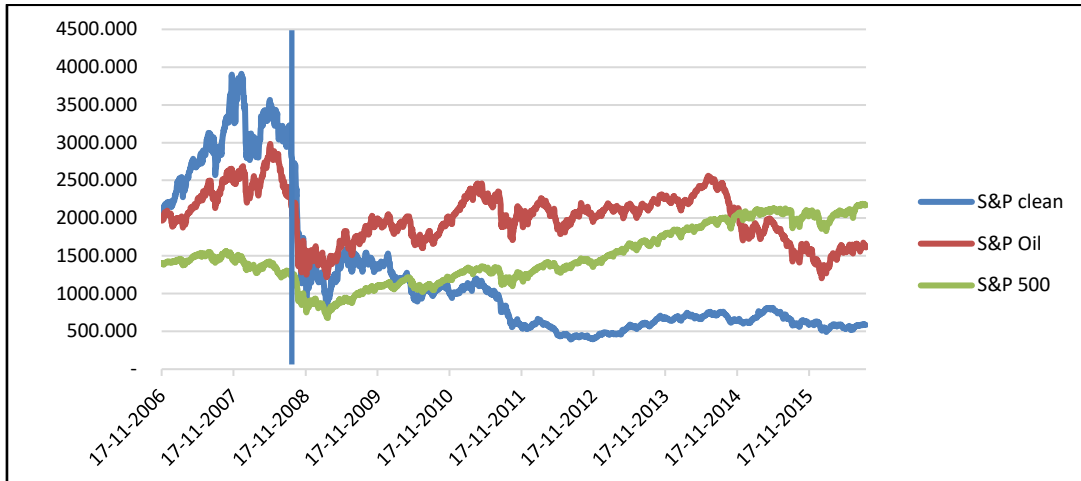
In the fossil energy group, the decline in coal consumption growth was replaced by increasing growth in the consumption of petroleum and natural gas. As for the clean and renewable energy groups, the decline in growth in nuclear and hydro consumption is replaced by an increase in the growth of other clean and renewable energy consumption. Seen in more detail per region, it turns out that only China that experienced positive growths for 11 years means that the amount of clean and renewable energy consumption in China is always increasing every year. The high growth of clean and renewable energy consumption in China can be seen from the average growth of 13.49% per year. Followed by Middle East 7.09% and Africa 3.51%. While the United States and Europe Eurasia relatively stable with an average growth rate of 1.76% and 1.87%.

Attributed to the special events of the world economic and financial crisis in 2008 and 2009, it turns out that only a small part of the region experienced negative growth for North America, Eurasia and the Middle East. While the US, China, Central and South America, Africa, and Asia Pacific continue to experience positive growths. Thus, the consumption of renewable clean energy in most areas of the World is not entirely affected by the global economic and financial crisis.

**THE MOVEMENT OF CLEAN AND RENEWABLE ENERGY STOCK PRICE INDEX**

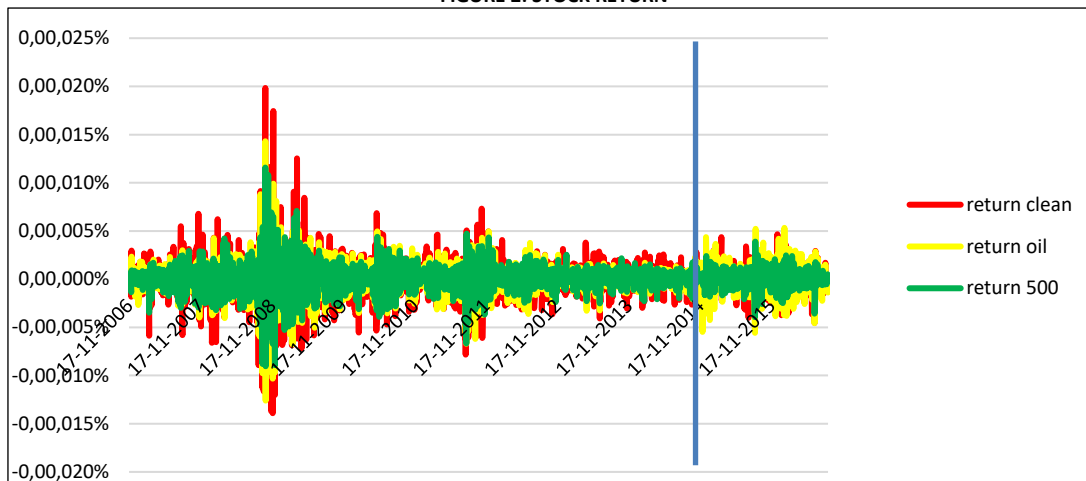
From the chart of the stock price index movement shows that the global economic and financial crisis in 2009 is very influential on the index of fossil energy stock price and clean renewable energy stock price index. Before the crisis, the clean energy stock price index was higher than fossil energy but after the crisis became lower. Even to this day, this two stock price indexes have not been able to return as before the global economic crisis especially for clean energy index.

FIGURE 1: THE MOVEMENT OF STOCK PRICE INDEX



Judging from the stock return, it is seen that the return index of fossil energy stock price and clean renewable energy stock price index fluctuated compared with the composite stock price index of S & P 500. Seen in 2008 and 2009 there are significant fluctuations that allegedly occurred abnormal return as result of the global financial crisis.

FIGURE 2: STOCK RETURN



**CORRELATION OF CLEAN AND RENEWABLE ENERGY STOCK PRICE INDEX**

The correlation analysis between clean energy stock price index, fossil energy and composite stock price index is done to see the relationship between the three. In addition, correlation analysis for t and t-1 is also considered because the movement of stock price index on this day is sometimes influenced by something that happened on the previous day.

TABLE 1: CORRELATION OF t AND t - 1 INDEX

Return of stock price index	Clean (t)	Clean (t - 1)	Fossil (t)	Fossil (t - 1)	S&P 500	S&P 500 (t - 1)
Clean (t)	1	.145**	.495**	.091**	.440**	.155**
Clean (t - 1)		1	.344**	.495**	.239**	.440**
Fossil (t)			1	.081**	.780**	.113**
Fossil (t - 1)				1	-.105**	.780**
S&P 500					1	-.107**
S&P 500 (t - 1)						1

The magnitude of correlation between S & P Global Clean Energy Index with S & P Global Oil Index is 0.495 means there is a quite strong positive relationship. While Pearson correlation value between S & P Global Clean Energy Index with S & P 500 is 0.440 means there is a quite strong positive relationship. Finally, the relationship between S & P Global Oil Index and S & P 500 has Pearson 0.780 correlation (close to 1) meaning that there is a very strong relationship between the two.

The correlation between clean and renewable energy stock price index with some macroeconomic indicators shows that the strongest correlation is between the index of stock price of renewable energy and the consumer price index (CPI) that is equal to 0.525. As for the macroeconomic indicators of GDP per capita and world oil prices are very weak or almost no correlation and the level of unemployment is negatively correlated with a strong enough.

TABLE 2: CORRELATION OF CLEAN ENERGY STOCK INDEX AND MACROECONOMICS

		SP clean	GDP per capita	Oil price	Unemployment	CPI
SP clean	Pearson Corr.	1				
	Sig. (2-tailed)					
GDP per capita	Pearson Corr.	-.123	1			
	Sig. (2-tailed)	.469				
Oil price	Pearson Corr.	.169	-.154	1		
	Sig. (2-tailed)	.316	.364			
Unemployment	Pearson Corr.	-.408*	-.791**	.188	1	
	Sig. (2-tailed)	.012	.000	.266		
CPI (consumer price index)	Pearson Corr.	.525**	-.002	.661**	-.184	1
	Sig. (2-tailed)	.001	.991	.000	.276	



**DIFFERENT TEST OF STOCK PRICE INDEX BEFORE AND AFTER THE GLOBAL ECONOMIC AND FINANCIAL CRISIS**

Using the clean and renewable energy stock price indices S & P Global Clean Energy Index (SP clean) and NASDAQ® Clean Edge® Green Energy Index (N clean) conducted a different test (Paired-sample T Test) to find out whether there is a difference in stock price index before and after the global economic and financial crisis. Cut off used as a boundary between before and after the global economic and financial crisis is January 1, 2008 as it is considered that the economic crisis began in late 2007 or early 2008.

**TABLE 3: PAIRED SAMPLES t-TEST S&P CLEAN ENERGY INDEX**

Paired Differences					t	df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
			Lower	Upper			
285.63447	1296.27836	75.98918	136.07424	435.19470	3.759	290	.000

Null hypotheses in this different test that there is no difference between the average SP Clean index before and after the crisis. The test uses two-tailed test with significance level  $\alpha = 5\%$ . The level of significance in this case means we take the wrong risk in making the decision to reject the correct hypothesis as much as 5% (5% significance or 0.05 is the standard measure often used in research). From the table above obtained t value is 3,759. The distribution table t is sought at  $\alpha = 5\%$ :  $2 = 2.5\%$  (2-sided test) with degrees of freedom (df)  $n-1$  or  $291-1 = 290$ . With excel obtained results for t table  $t_{inv}(0.05, 290)$  Of -1.6501. The testing criteria is  $H_0$  accepted if  $-t \leq t_{table} \leq t$  arithmetic  $\leq t$  table and  $H_0$  is rejected if  $-t < t_{table}$  or  $t > t$  arithmetic  $> t$  table. By probability  $H_0$  is accepted if P value  $> 0,05$  and  $H_0$  is rejected if P value  $< 0,05$ .

By comparing t arithmetic with t table and probability obtained t value  $> t$  table (3.759  $> -1.650$ ) and P value (0,000  $< 0,05$ ) then  $H_0$  is rejected means that there is a difference between mean of S & P Clean index before Crisis after crisis. Mean Scores on Paired Samples Statistics before the crisis were higher than after the crisis or positive t mean the average S & P Clean index before the crisis was higher than after the crisis.

**TABLE 4: PAIRED SAMPLES T-TEST NASDAQ CLEAN ENERGY INDEX**

Paired Differences					t	df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
			Lower	Upper			
35.86835	118.11632	6.92410	22.24049	49.49621	5.180	290	.000

Null hypothesis in this research that there is no difference between the average Nasdaq Clean index before and after the crisis. The test uses two-tailed test with significance level  $\alpha = 5\%$ . The level of significance in this case means we take the wrong risk in making the decision to reject the correct hypothesis as much as 5% (5% significance or 0.05 is the standard measure often used in research). From the table above obtained t value is 5,180. The distribution table t is sought at  $\alpha = 5\%$ :  $2 = 2.5\%$  (2-sided test) with degrees of freedom (df)  $n-1$  or  $291-1 = 290$ . With excel obtained results for t table  $t_{inv}(0.05, 290)$  Of -1.6501. The test criteria used are  $H_0$  accepted if  $-t \leq t_{table} \leq t$  arithmetic  $\leq t$  table or  $H_0$  is rejected if  $-t < t_{table}$  or  $t > t$  arithmetic  $> t$  table. By probability  $H_0$  is accepted if P value  $> 0,05$  and  $H_0$  is rejected if P value  $< 0,05$ .

By comparing t arithmetic with t table and probability obtained t value  $> t$  table (5,180  $> -1,650$ ) and P value (0,000  $< 0,05$ ) then  $H_0$  is rejected means that there is difference between mean of index average of Nasdaq Clean Energy Before the crisis after the crisis. Mean Scores on Paired Samples Statistics before the crisis were higher than after the crisis or t positive mean the average Nasdaq Clean Energy index before the crisis was higher than after the crisis.

The same test was conducted on the return and abnormal return of clean and renewable energy stock price index for S & P and Nasdaq. The overall research shows the same result that there is a significant and significant difference between before and after the global economic and financial crisis where the average before the crisis is greater than the crisis.

**EVENT STUDY THE CONFERENCE OF PARTIES TO THE STOCK PRICE INDEX**

Event study was conducted to find out how was the reaction of clean and renewable energy stock price index to the implementation of conference of parties (COP) as a commitment of countries improving the quality of the earth's climate. There are 2 COP which will be used in research sample that is 21st COP in Paris and 19th COP in Warsaw. The estimated period of 100 days, the 29-day event period and the date of the incident are the first day of commencement of the COP. COP is usually held for 10 days.

Prior to the Independent Sample T test, the condition must be tested for normality and homogeneity of the data under study. The significance value used is Shapiro Wilk because the number of data samples less than 50 ( $n < 50$ ) turns out to be greater than 0.05 so that the data is normally distributed. The results of the Independent Sample T test show that Levene's Test for equality of variances is  $0.636 > 0.01$ , assuming the data variance is the same or homogeneous. The test results also show that the significance value (sig (2-tailed) or P value)  $0.771 > 0.05$  then the hypothesis  $H_0$  is accepted that there is no significant difference in average abnormal return before and after the implementation of the 21st COP in Paris. As for the 19th COP, P value = 0.448 is also greater than 0.05 so that  $H_0$  is accepted.

Based on the test t-Test: Two-Sample Assuming Equal Variances using Microsoft excel obtained the same results that the value of t arithmetic = - 0.294 and when compared with t table (2.055) then obtained t count  $< t$  table.  $H_0$  hypothesis is thus accepted that there is no significant difference of average abnormal return before and after the implementation of the 21st COP in Paris.

**4. CONCLUSIONS**

Based on the results of this research that has been described before, it can be concluded that during the 2005 - 2015 period or since the Kyoto Protocol was enacted in 2005, the share of world fossil energy consumption has declined and has been replaced by an increase in the portion of clean and renewable energy although still relatively small at 1.47%. The global economic and financial crisis in 2009 has led to a decrease in consumption growth of all energy types except for clean and other renewable energy such as wind energy, solar energy, geothermal energy and biomass. The United States and Europe have reduced the amount of fossil energy consumption where the average growth rate is negative, while China is a country with the highest growth rate of clean and renewable energy consumption in the World.

There is a strong and real positive relationship between S & P Global Clean Energy Index and S & P Global Oil Index. Meanwhile, between S & P Global Clean Energy Index with S & P 500 there is a real negative (opposite) relationship. Between the S & P Global Oil Index and the S & P 500 there is a strong relationship or almost no relationship between the two. There is a strong correlation between the stock price index of renewable energy and renewable energy with the consumer price index (CPI). As for the macroeconomic indicators of GDP per capita and world oil prices are very weak or almost no correlation and the level of unemployment is negatively correlated with a strong enough.

After the Kyoto Protocol, the price index of clean and renewable energy stocks was higher than the fossil energy stock price index until the global economic and financial crisis in 2009. After that, the index of clean and renewable energy stock price was always lower than the fossil energy stock price index up to now. In terms of return, since the Kyoto Protocol the price index of clean and renewable energy stocks appears to be fluctuating compared to the fossil energy stock price index until 2014 when the prices of oil and coal commodities experienced a very sharp decline. Since then the fossil energy stock price return index has become more fluctuating.

There is an average difference between clean and renewable energy stock price indexes before and after the global economic and financial crisis, i.e. the average index before the crisis is significantly greater than after the crisis. There is a difference of stock return and abnormal return of clean and renewable energy stock before and after global economic and financial crisis. There is no significant difference in average abnormal return before and after the implementation of the 21st and 19th COP.

Very high increased of growth in consumption and demand for other clean and renewable energy and resilience to the global economic crisis creates enormous business opportunities for Investors, Private Companies and Government. The availability of renewable energy sources scattered throughout the country allows the Government to meet the electricity needs, especially in remote areas and border areas that have not been reached.

The management of capital market should consider to immediately making stock price index of clean and renewable energy sub sector. For researchers and academics, more research on what type of clean and renewable energy sources, which have the highest demand and the lowest investment cost so that maximal profit is required.

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## DIGITAL FINANCE: A CATALYST TO FINANCIAL SERVICES

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**ABSTRACT**

*Financial services are the backbone of an economy, which caters the basic needs of its citizen i.e. to save, to invest and to protect. Digital finance is a financial service that covers financial services delivered through digital network/ infrastructure including mobile and internet. The present study is conducted to explore the growth potential of digital finance and major problems faced in emerging economies. Digital finance has a great potential to boost the GDP of emerging economies. Digital infrastructure, financial service markets and financial products are three building blocks of digital finance. The major hurdle in the growth of digital finance is the problem of financial exclusion, which is actually spread beyond the poor section of the society. It is further concluded that 93 percent of all transactions in emerging countries are executed in cash as compared to 50 percent in developed nation.*

**KEYWORDS**

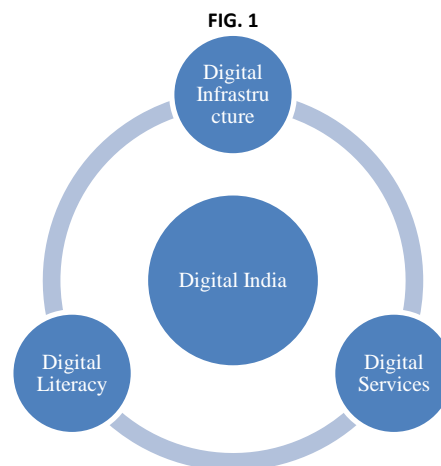
financial services, digital finance and digitalization.

**JEL CODE**

E49

**1.1 INTRODUCTION**

Financial services are the backbone of an economy, which caters the basic needs of its citizen i.e. to save, to invest and to protect. In recent years financial digitalization emerged as a new concept in Indian economy. Digitalization is to make services available by an improved online infrastructure and internet connectivity or by making technology empowered country. Financial digitalization or digital finance covers financial services delivered through digital network/ infrastructure including mobile and internet. Digital finance covers a) financial services such as payments, savings accounts, credit, insurance, b) users include individuals, businesses and government, c) service providers includes banks, financial institutions telecom companies and financial technology. In India, in order to enhance greater internet connectivity, increased financial inclusion and inclusive growth- Digital India campaign launched by Government of India in the year 2015. Digital infrastructure, digital services (includes digital finance) and digital literacy are its three core components.

**1.2 LITERATURE REVIEW**

**Smith et al (2001)** conducted a study on digital finance and discuss the four dimensions of internet market. They concluded that the internet markets are more effective than the conventional market with respect to price level, price elasticity and menu cost. The study also finds that there is significant price dispersion in internet market.

**Barbesino et al (2005)** conducted a study on digital finance in Europe. They analysed Competitive dynamics and online behavior in the economy. They describe the online banking in Europe, by observing behavioural of internet user accessing bank websites and managing their finances online.

**Liu (2005)** investigate the reading behavior in digital environment. He analyzed that if people spend more time on reading electronic documents then a screen based reading behavior is emerged. He also discusses the printing behavior, annotating and highlighting while reading is considered as printing behavior.

**Radcliffe and Voorhies (2012)** conducted a study on digital financial inclusion. They describes that the process of financial inclusion includes physical, digital, and psychological clouds. They also describe the stages of digital financial inclusion that at starting the basic connectivity is needed and then there must be a full range of digital financial services.

**Winiacki and Kumar (2014)** highlight the overview of the digitally financed energy access sector, advancements in business models and product that are offered. Their main focus is on businesses deploying PAYG solar photovoltaic products using digitized payments and providing unique hardware to control the use of energy services. They describe the experiences that combine digital finance with a wide range of energy technologies.

**1.3 METHODOLOGY**

People in emerging economies do not have full facilities or they do not completely participate in financial system therefore they have access to credit facilities within their informal/personal network and this cost high too. As a result major chunk of wealth circulate outside the formal financial network resulting scarce and expensive credit. Therefore, the solution of this problem lies with the digital finance.

The present study is descriptive study primarily based on secondary data. Secondary data collected from Mckinsy Report, 2016 on digital finance for all.

**1.4 OBJECTIVES**

The objectives of the present study are as per following:

1. To explore the growth and benefits of digital finance in emerging economies
2. To identify the problems faced in executing digital finance among emerging economies.

**1.5 ESSENTIALS OF DIGITAL FINANCE**

Digital infrastructure, sustainable financial market and financial products are three building blocks essential to capture potential value of digital finance.

**A) DIGITAL INFRASTRUCTURE**

Infrastructure needed for digital finance can be implemented at less time, at low cost as compare to other type of infrastructure. Mobile handset and internet connectivity is the vital component of digital infrastructure. Smart phone ownership, network coverage and access to affordable data plan is high in developing countries indicating vibrant future of digital finance.

**B) SUSTAINABLE FINANCIAL MARKET**

Digital infrastructure needs to be supported by a sustainable and dynamic financial market, including banks, financial institutions, mobile operators and telecom companies. Financial market also require financial service regulator to strike balance between service providers and investors. Financial market should ensure check on cyber risk or other information technology failure. Besides this, countries need to create a competitive environment and encourage innovative, wider range of financial products and services among new entrants.

**C) FINANCIAL PRODUCTS/SERVICES**

Smart and range of financial products needs to offer under digital finance to attract people for digitalization. Affordable, user friendly and convenient products should be encouraged to promote digitalization

**1.6 BENEFITS OF DIGITAL FINANCE****FOR INDIVIDUALS**

Digital finance would improve availability of wider range of financial products, convenience, save time and reduce the cost of financial services. Digital finance improves access to education, health care, improve gender equality, and reduce poverty.

**FOR BUSINESSES**

Digital payment enables business to monitor electronic sales records, improve cash flow, monitor productivity, raise profitability, supply management, receivable management and enhance customer understanding. Digital records of businesses transaction help businesses to predict the credit quality.

**FOR FINANCIAL-SERVICES PROVIDERS**

Digital finance offers huge opportunity to financial service providers by shifting cash payments to digital payments which annually save about \$400 billion in direct cost. Digital finance benefited telecom companies, microfinance institutions (MFIs), financial technology startups, even handset manufacturers.

**FOR GOVERNMENTS**

Digital finance enables government spending on infrastructure, education and health care. Digital payment reduces leakage in government expenditure. Digital payment foster annual tax collection by approximately \$40 billion also it has reduced the size of informal financial system. Digital finance improved cost efficiency by shifting cash to digital transaction.

**1.7 PROBLEMS FACED IN EXECUTING DIGITAL FINANCE AMONG EMERGING ECONOMIES**

A significant part of the population of developing countries is not a part of financial system. In emerging countries, people do not have the access to financial services as enjoyed by the people in developed nations. About forty-five adult population of developing nation do not have bank account. The problem of financial exclusion among poor or middle class also underserved financial services.

Ninety three percent of the transactions are executed in cash across developing countries compared to fifty percent in developed nations.

Less than twenty percent women in emerging economies have formal account. This hinders the growth of digital finance.

**1.8 CONCLUSION**

In the long term, beyond expanding financial access digital finance reduce cost of transactions, increase prompt and convenient financial transaction among individuals, businesses, government and other players of financial market. Digital finance ensures financial inclusion and introduces more transparent financial system. Digital payments so called micro payments permit people to transact in small amounts. It is concluded that economic development is a long journey but digital finance certainly act as a catalyst to this.

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