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DIGITAL ECONOMY: CHALLENGES AND OPPORTUNITIES

Department of Business Administration

MES College Marampally,

Aluva, Ernakulam, Kerala 683 107

(Govt. Aided, Affiliated to Mahatma Gandhi University, Kottayam)

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Proceedings of ICSSR Sponsored National Conference on
Digital Economy: Challenges and Opportunities

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MESSAGE

Today, technology is advancing citizen empowerment and democracy that once drew their strength from Constitutions. Technology is forcing governments to deal with massive volume of data and generate responses, not in 24 hours but in 24minutes. When you think of the exponential speed and scale of expansion of social media or a service, you have to believe that it is equally possible to rapidly transform the lives of those who have long stood on the margins of hope. We are living through the most profound changes in the Economy since the Industrial revolution. Technology, Globalization and the accelerating pace of change have yielded chaotic markets, fierce competition and unpredictable staff requirements. In any given moment we have two options: to step forward into growth or to step back into safety. Digital India is an enterprise for India's transformation on a scale that is, perhaps, unmatched in human history. Not just to touch the lives of the weakest, farthest and the poorest citizen of India, but change the way our nation will live and work.

With the Digital boom in the Indian Economy the central question we are going to face in the upcoming years would be What are people for in a world that does not need their labour, and where only a minority are needed to guide the " bot –based economy? But the only speculative answer we could provide to it is to quote the fact that "You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete". India will be a global player in the digital economy and it will be competitive with any country in the world. Therefore we could very well proclaim that with digital era, today is either the beginning of the end or the end of the beginning. But today we are definitely making history.

*The Conference on "**Digital Economy : Challenges & Opportunities**" would hence surely help in imparting impulsive strategies to make a change in the present digitalized system of Indian Economy. I congratulate the Dept. of Business Administration for choosing a very relevant topic for the ICSSR Sponsored National Conference.*

Dr. K. A. Zakkariya
Director, DDU Kaushal Kendra
Cochin University of Science & Technology

MESSAGE

The Digital India Programme aims to transform India into a digitally empowered society and knowledge economy by leveraging IT as a growth engine of new India. The challenge for India is to do innovative, compact and sustainable urbanization. India's time has come to make a world showcase for technology. It's 2018, and it's crazy that even though India is known as a powerhouse of software, the availability of electronic government services to citizens is still comparatively low.In the digital India huge number of villages interconnected with high speed network will really undergo a huge change from backward regions to complete digitally equipped areas. All the cities, towns and villages in India will get more tech savvy. The programme 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. In a nation where most consumers have hitherto been dealing in cash, the currency switch has provided the Centre an opportunity to give a big push to electronic transactions to improve transparency and weed out black money. The Prime Minister's move to incentivize digital payments will offer a strong support to our ongoing efforts in helping the country leapfrog the cash generation to digital payment solutions. This will not only help millions of Indians overcome the hassles of dealing in cash but also act as a significant step towards propelling India to emerge as a truly cashless economy. We also cannot forget the fact that Demonetization made people to know the value of money.

As long as we don't back away from a problem with the fear of losing, and fight back with the knowledge of what went wrong, we will definitely win in the long run.

*The Conference on "**Digital Economy : Challenges & Opportunities**" would deliver broad insights into the booming digitalization concepts in the field of business and management and also transformation of traditional economy into digital economy which has opened new opportunities as well as posed challenges. I congratulate the Dept. of Business Administration for choosing a very relevant topic for the ICSSR Sponsored National Conference.*

Dr. A. Biju
Principal
MES College, Marampally

PREFACE

The last decade has seen the growth of phenomena which has led to important changes in the worldwide economy. It is the development of the digital economy, based on the digitalization of previously existing goods and on the development of new purely digital goods. This technology has not only permitted the creation of many new goods or services, but has also dramatically changed the way an entire category of goods in the economy are created, produced, distributed, exchanged and consumed. While originally restricted to a few types of software, the scope of use of digital technology has progressively increased to encompass many kinds of goods: music, films, photos, books, etc. The digital revolution will likely improve quality of life, efficiency at work, and continue to transform leisure. The world is now ready for transactions with digital goods and services. Consumers search the internet; use their smart phones, and share information, pictures, and experiences, much of which has implications for commerce or social discourse. Successive generations are likely to increasingly use digital tools for consumption and leisure; this means that consumer-driven activism will remain a major force and may continue to increase in importance.The Scope of this conference is to discuss about the various opportunities and challenges in digital economy.

I, on behalf of Department of Business Administration, MES College Marampally, convey my sincere gratitude to Indian Council of Social Science Research (ICSSR), Dr. A Biju, Principal, College Management Committee and Members of Organizing Committee for their unending support and guidance in organizing this Conference.

We are thankful to the authors for their cooperation and active participation. The authors themselves bear the responsibility for their interpretation and literature citation. I hope that this Conference will provide a platform for Professionals, Academicians and Research scholars to achieve their goals in their academic pursuit.

Dr. Sopna V Muhammed
Convener, NCDE2018
Head, Dept. of Business Administration

ICSSR Sponsored National Conference on Digital Economy: Challenges & Opportunities

Organised by

Department of Business Administration, MES College, Marampally, Aluva

List of actual participants of the Conference

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1	Ms. Jerin Joseph	Assistant Professor	Jai Bharath Arts and Science College, Perumbavoor
2	Princy Francis	Assistant Professor	MES Asmabi College, Kodungallur
3	Murugan R	Ass. Prof,Dept. of Computer Application	MES College, Marampally, Aluva
4	Mr. Deepak Joy Mampilly	Assistant Professor	Rural Academy for Management Studies (RAMS), Kuzhuppilly, Ayyampilly P.O., Kochi
5	Deep Joy Mampilly	Deputy director	Ministry of I&B
6	Rujitha Shenoy	Assistant Professor	Inter University Centre for IPR Studies, CUSAT
7	Jaseena K U	Asst. Prof,Dept. of Computer Application	MES College, Marampally, Aluva
8	Shiren Panjolia	Student	National University of Advanced Legal Studies
9	Dr. K.P. Jabir Moosa	Associate Professor	M.E.S College of Engineering, Kuttippuram
10	Dr. Raphika P M	Ass. Prof,Electronics	MES College, Marampally, Aluva
11	Jacob Joju	Assistant Professor	S B College, Changanassery
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MES College Marampally
DEPARTMENT OF BUSINESS ADMINISTRATION
ICSSR Sponsored National Conference on
Digital Economy : Challenges & Opportunities
24th January 2018 – PROGRAMME SCHEDULE

Venue: Conference Hall **Date & Time: 23/01/2018**

09:00 am – 10:00 am : **Registration**

10:00 am – 11:00 am : ***Inauguration***
Mr. Girivasan V
Deputy General Manager, State Bank of India

Session I

11.10 am – 12:40 pm Resource Person : **Dr. B Johnson**
Professor and Head
Department of Commerce & Management Studies
University of Calicut

Topic : **Demonetization and Digital India**

12:40 pm - 01:30 pm : **Lunch Break**

Session – II

1:30 pm – 02:45 pm Resource Person : **Dr. N Ajith Kumar**
Market Economist and Former Head,
Department of Economics, Cochin College

Topic : **Digital India and its impact on Small Scale Industry**

02:45 pm - 4:30 pm : **Technical Session –I**

Chairperson : **Prof. (Dr.) K C Sankaranarayanan**
Former Dean, Department of Applied Economics CUSAT

Technical Session –II

Chairperson : **Dr. Rosewine Joy**
Professor in Economics, Presidency University, Bangalore

Venue: Conference Hall **Date & Time: 24/01/2018**

Session – III

09:45 am – 11:15 am	Resource Person	:	**Dr. Hareesh Ramanathan** Professor and Head Toc H Institute of Management and Technology
	Topic	:	**Internet & Branding and its relevance on Digital Economy**

Session – IV

11: 25 am – 12:40 pm	Resource Person	:	**Dr. Santhosh Kumar S** Professor, School of Management Studies, CUSAT
	Topic	:	**Digital Financial Inclusion in India**
12:40 pm – 01:30 pm		:	**Lunch Break**
01:30 pm - 04:00 pm		:	**Technical Session - III**
	Chairperson	:	**Ms. Jasmi P M** Manager-Law State Bank of India
			Technical Session - IV
	Chairperson	:	**Dr. Elizabeth George** Associate Professor & Head Adi Sankara Business School, Kalady
04:00 pm – 4:30 pm		:	**Valedictory Function**

ICSSR sponsored National Conference on
Digital Economy : Challenges & Opportunities

The challenge for India is to do innovative, compact and sustainable urbanisation. India's time has come to make a world showcase for technology. It's 2018, and it's crazy that even though India is known as a powerhouse of software, the availability of electronic government services to citizens is still comparatively low. In the digital India huge number of villages interconnected with high speed network will really undergo a huge change from backward regions to complete digitally equipped areas. All the cities, towns and villages in India will get more tech savvy. The programme 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. The Digital India Programme aims to transform India into a digitally empowered society and knowledge economy by leveraging IT as a growth engine of new India.As long as we don't back away from a problem with the fear of losing and fight back with the knowledge of what went wrong, we will definitely win in the long run.

In a nation where most consumers have hitherto been dealing in cash, the currency switch has provided the Centre an opportunity to give a big push to electronic transactions to improve transparency and weed out black money. The Prime Minister's move to incentivize digital payments will offer a strong support to our ongoing efforts in helping the country leapfrog the cash generation to digital payment solutions. This will not only help millions of Indians overcome the hassles of dealing in cash but also act as a significant step towards propelling India to emerge as a truly cashless economy. We also cannot forget the fact that Demonetization made people to know the value of money. The poverty of our century is unlike that of any other. It is not, as poverty as before, the result of natural scarcity, but of a set of priorities imposed upon the rest of the world by the rich. Consequently, the modern poor are not pitied…but written off as trash. The twenty first century consumer economy has produced the first culture for which a beggar is a reminder of nothing. It is at this crucial point the Conference on Digital Economy become highly relevant.

Contribution of the Conference to the existing body of Research

Traditional ways of doing business are changing. The 'New Economy' is looming on the horizon. It is no longer just a concept. It is a reality that can disrupt businesses! Consumers, organizations, governments are all digitally enabled and empowered today. We are living in the era of digital economy, digital is ubiquitous.

The digital economy brings with it a number of opportunities, but new challenges and rules of the game in the global market. Positioning of the country on the global stage largely depends on its ability to adapt to new conditions. Digital economy brings a new set of benefits, which can make it possible to reduce the differences that exist between rich and poor nations. Developing countries have the opportunity to transform its economy and to contribute to the development of the digital economy. Although these economies are characterized by high added value, faced with numerous obstacles, many developing countries cannot adequately respond to the demands of the digital economy. Inadequate access to the latest technology, sophisticated telecommunications infrastructure, low computer literacy as well as numerous cultural and socio-economic factors are just some of the challenges that developing countries have to face. On the other hand, with a clear policy and specific plans and objectives, it is possible to skip a few steps and effectively respond to the demands of the global market.

This conference aims at providing broad insights into the booming digitalization concepts in the field of business and management and also transformation of traditional economy in to digital economy which has opened new opportunities for growth and posed challenges

Objectives of the Conference

- Provides research scholars, educators and practitioners from different management disciplines, the opportunity to interact, network and benefit from each other's research and expertise related to the theme
- Synthesize research perspectives and foster interdisciplinary dialogues for developing integrated approaches to the opportunities & challenges thrown up by digital economy

Thirty six Research papers were presented by various scholars from different Institutions. Total number of participants was **102** which includes **41** faculties and **the rest includes research scholars and** students. The conference was a source of advanced information for those involved directly or indirectly in Digital Economy.

Contents

ADVERTISING: A STUDY ON THE LIKEABILITY AND BELIEVABILITY FACTORS OF DIGITAL TRANSIT ADVERTISING WITH SPECIAL REFERENCE TO THIRUVANANTHAPURAM RAILWAY DIVISION

Dr. K. P. Jabir Moosa
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Abstract

Transit advertising is advertising in outdoor locations – typically in places where people are in transit. Advertising likeability deals with how consumers process advertising information and their involvement with it. Advertisements that consumers like are likely to be effective because it helps them to process the information in the advertisement. Advertising believability represents the net effect of advertising upon the mind of the reader, listener or viewer. Believability depends on the interaction of each advertisement with the consumer's attitudes and memories accumulated from prior experience. Likeability and Believability factors measures how people felt about the advertisement they viewed or heard and generally accepted as a key indicator to advertising effectiveness due to its predictive relevance to behaviours. Indian Railways is owned and operated by the Govt. of India and Thiruvananthapuram Railway Division is one among the six divisions under Southern Railway. The other divisions are Chennai, Madurai, Salem, Trichy and Palakkad. The study aims to understand the effectiveness of digital transit advertising in Thiruvananthapuram Railway division by measuring the likeability and believability factors of transit advertising. The study throws light in to the importance of measuring advertising effectiveness for developing marketing mix strategies.

Keywords

Transit Advertising, Advertising Effectiveness, Likeability Factor, Believability Factor, Brand Choice.

1. Introduction

1.1 Likeability Factor of Advertising

Advertising likeability deals with how consumers process advertising information and their involvement with it. Likeability therefore has to do with the extent to which consumers are ready to process information that is carried by an advertisement. Advertisements that are liked are those that engage consumers' minds and hearts. Consumers move through a cognitive and

affective phase before manifesting a particular behaviour. Some marketers and advertising practitioners believe that advertising likeability has a direct link to its effectiveness. Advertisements that consumers like are likely to be effective because it helps them to process the information in the advertisement. Likeable advertisements are better at interrupting the scanning phase of consumers – also referred to as the "stopping power of advertisements" – improving processing, and producing more positive judgments of the message, and hopefully, the brand. In general, liking a commercial is thought to equate with the advertisement's effectiveness.

The presence of positive entertainment (e.g., visual imagery, upbeat music, humour) in advertisements can make them more attractive and persuasive.

"Good copywriters have always resisted the temptation to entertain…The purpose of a commercial is not to entertain the viewer, but to sell him."

David Ogilvy in Confessions of an Advertising Man, 1963

"… the latest wave of factor-analysis reveals that [entertaining with] humour can now sell."

David Ogilvy in Ogilvy on Advertising, 1985

1.2 Believability Factor of Advertising

Advertising believability represents the *net effect* of advertising upon the mind of the reader, listener, or viewer. Few advertisers, ad researchers, or psychologists would disagree with the statement that an advertisement is "believed" when it leaves the consumer with that attitude, belief, or intention towards the product which the advertiser intended that he or she should have, after exposure to the advertisement. However, believability is not an inherent property of the advertisement itself. It is not a mystic something that some advertisements have and others do not. Believability depends on the interaction of each advertisement with the consumer's attitudes and memories accumulated from prior experience. Belief in an advertising message shortly after the consumer is exposed to the ad is often misleading.

With the passage of time, belief may either increase or fade away. Both an increase of belief with passage of time and a decrease in belief are forms of selective recall.

1.3 Transit Advertising

Transit advertising is advertising in outdoor locations – typically in places where people are in transit. For instance, advertising at bus stops would be transit advertising. Yet another example of transit advertising would be advertising in railway waiting area.

Transit advertising is defined as:

"*Advertising displays affixed to moving vehicles or positioned in the common areas of transit stations, terminals and airports."*

(OAAA – Outdoor Advertising Association of America)

Transit advertising includes Airport Displays, Bus Displays, Mobile Displays, Subway and Rail Displays, Taxi Displays, Truck side Displays and Vehicle wraps. It is impossible to ignore. We cannot zap it. It

cannot be turned off like television, turned out like radio or discarded like newspaper and magazines. Instead it puts the message at eye-level in front of thousands of consumers – all day, everyday – and it demands attention. What's more, it is not cluttered up with dozens of competing messages in the same space, like other commercial media.

The benefits of Transit advertising are Cost-effective, Maximum exposure, No wasted circulation, Innovative, Uncluttered, Unsurpassed reach and frequency, Fits into virtually any advertising campaign, Creates top-of-mind awareness and Improves name recognition. Transit advertising cost less than television, radio, newspaper or bill boards. During the day time when television, newspaper and often even radio can't reach most folks, transit advertising delivers the message at the best possible time – when people are out of the house or office and ready to respond. The advertisement is seen non-stop by people 24 hours a day, seven days a week.

Television, radio and to a lesser extent, even newspapers reach only specific market segments. But transit advertisements reach the entire market – up to 90% of the adult population. And they reach them with greater frequency. The message is seen by more people, more often than with any other type of advertising.

Transit advertisements stimulate immediate recognition of the brand name. The larger-than-life impact makes the business appear larger than life too and builds exceptional recall. Transit advertisements complement and reinforce the overall advertising program. All kinds of businesses have discovered the benefits of transit advertising, like increased name recognition and top-of-mind awareness. It is a proven and powerful vehicle for reaching potential customers – again and again.

1.4 Indian Railways

Indian Railways is the largest railway network under a single management in the world. It is often called the "life line of India", because it provides a source of livelihood to a large number of people and brings long-distance travel within the reach of the average Indian. Indian Railways is an Indian state-owned enterprise, owned and operated by the Government of India through the Ministry of Railways. It is one of the world's largest railway networks comprising 119,630 kms of track over a route of 67,312 kms and 8,500 stations. In 2015-16, IR carried 8.107 billion passengers annually or more than 22 million passengers a day (roughly half of whom were suburban passengers) and 1.101 billion tons of freight in the year. In 2015–16 Indian Railways had revenues of Rs.1.683 trillion which consists of Rs.1.069 trillion from freight and Rs.442.83 billion from passenger tickets.

Southern Railway, in its present form, came into existence on 14th April 1951. Headquartered at Chennai, the Southern Railway comprises six divisions namely Chennai, Thiruchchirapalli, Madurai, Palakkad, Thiruvanathapuram and Salem.

Indian Railways occupy its place in the mind of media planners as the most important vehicle in transit advertising. The number of travelers per day in Indian trains and the hours (even days) that are spent in

them enhance its importance. Some of the popular media vehicles of transit advertising in Indian Railways are Station hoardings, Railway bridge hoardings, Posters, Inside carriage advertising, Passenger tickets, Sign below clocks, Closed circuit television, Colour trains, Glow sign box, Roto-sign box, Digital boards, Passenger information boards, railway announcement jingle ads etc.

Traditionally, advertising in railways is done on client basis or sub-letting basis. In client-based agreements, an agency introduces a client to the railways. The agreement is signed between the railways and the client, while the agency keeps the commission. In the sub-let method, the railway sells the media property to agencies for a certain period of time. The agency sells that space at a premium to other advertisers.

1.5 Concept of Advertising Effectiveness

The trials and tribulation of marketers begin as they set out to conceptualize the key terms of advertisement measurement viz. effectiveness. A liberal use of such familiar terms as productivity, performance, ability efficiency and impact has further confounded the confusion. Reddin's (1970) description of effectiveness, however, comes very handy in this context. According to him, effectiveness "*means doing things rightly, producing creative solutions, optimizing resource allocation and utilization and obtaining results".*

Types of Advertising Evaluation: Marketers have a choice for conducting either pre-test evaluation or post-test evaluation or both together. The objective of pre-testing is to measure likelihood of preparing most effective advertising message. It can help detect and eliminate weaknesses or flaws that may ultimately result in consumer indifference or negative audience response.

Post-testing evaluation, on the other hand, pertains to determining effectiveness of an advertisement or campaign after it has run. It is normally more expensive and time-consuming. However, it is superior to pre-testing because the former uses real-life setting to collect and analyze data in order to evaluate advertisement effectiveness. The findings obtained from post-testing can provide useful guidelines for further advertisements.

For this study, to find out the transit advertising effectiveness, the researcher measured the attitude of passengers towards advertising in terms of likeability and believability factors.

1.6 Importance of Investigation

The resentment towards railway advertising by corporate and large advertisers has occurred as the railways have never nursed this medium. Though there is a scope to negotiate, the railways usually have a 'take-it-or-leave-it' kind of rate cards. Moreover, there is no measurement system to support this medium.

To attract bigger players, the railway is planning to group smaller stations and to give sole rate contract. Start-ups can take this as an investment opportunity and get sole rate contract from railways and sell the space to advertisers. This will also generate revenue for stations which have less demand for advertisements. As for it becoming the mainstream advertising medium, it is too far-fetched at the moment. The first step in

the right direction would be to have some standardization of display and improve the ambience in which these ads are placed.

Currently, railways earns about 2% of the total railway revenue from banners, hoardings and on-platform advertising from around 1,000 A-class stations. Railway officials say that this is much less than the actual advertising potential of the railways. This under-recovery is also attributed to a lack of advertising policy. Therefore through this initiative, railway is aiming at generating business worth Rs.1500 crores annually.

The plan is to outsource the entire ad-revenue generation to the agencies in return for a fixed annual fee, for a period of five years. The agencies, will be given a free hand to generate ad-revenue in association with brands, as per their choice. The agencies would be free to use all available space, including bogeys, wagons, space available on the platforms and even the smaller stations that fall on the way. The agencies should first get convinced about the effectiveness of railway transit advertisements.

Currently, the process of generating advertising revenue on railway stations is "not-systematic", but the effort is on to streamline the process. Railways will be flexible in their process and one ad-agency would be able to manage more than one zone depending on their financial bid. Given, the policy initiatives in India, a new era of start-up business is in place with an intention of new job creations and hence economic resurgence. A culture of entrepreneurship is to be nurtured. Railway transit advertising is an area for aspiring young entrepreneurs to look in to as start-ups.

1.7 Objectives of the Study:

1.7.1 To understand the effectiveness of digital transit advertising in Thiruvananthapuram Railway Division by measuring the likeability and believability factors of advertising.

1.7.2 To measure the relative importance of each dimensions of measurement.

2. Previous Research

In past decades, researchers have tried to measure attitudes towards advertising taking different types of samples. Attitude is an individual's internal evaluation of an object such as a branded product, and has been an important concept in marketing research since 1960s. Hoyer and MacInnis (1997) define attitude as "relatively global and enduring evaluation of an object, issue, person, or action". There are two major reasons for this long-term interest. First, similar to Hoyer and MacInnis's definition, attitudes are often considered relatively stable and are enduring predisposition for consumer to behave in particular way (Fishbein & Ajzen, 1975). Thus, consequently, they should be useful predictors of consumers' behavior towards a product or service (Oskamp c.f. Wu, 1999). Second, several theoretical models on the attitude construct can be found in social psychology literature especially through studies by Fishbein and Ajzen (1975) that have stimulated attitudinal research in marketing.

Attitude towards advertisement (Aad) has been defined as a predisposition to respond in a favourable or unfavourable manner to a particular advertising stimulus during particular exposure situation (Mackenzie, Lutz & Belch, 1986; Biehal, Stephens & Curlo,

1992) In a print advertisement for example, consumers will be depending very much on the picture(s) and information about the product that are inserted in it to motivate them to take a closer look at and continue reading it. An advertisement that provides good picture(s) may give a significant impact as the picture(s) help reader consumers to get "connected" with the product. Consumers can get closer to the product as they experience certain feeling(s) from watching the product e.g. the product seems authentic, credible and real (Brosius, Donsbach & Birk, 1996). According to Garcia and Stark (1991), novel in-text picture(s) are identified as (advertisement) content component(s) that are most likely to foster curiosity and thus motivate readers to continue reading. This is in addition to the line of catchy words (especially in the headline) that are carefully positioned to attract consumers when they read them (Boduch, 2001). A good advertisement can change one's perception as has been proven by N.W. Ayers, a New York based advertising agency on whom in 1938 was given a task of changing public perception towards diamond from a "one time object of financial investment" to being a "symbol of commitment and everlasting love" (Jhally, 2003). Today, we can see that the perception of romantic love is associated with the giving of diamonds to the loved ones.

Consumers' attitudes toward an ad (Aad) have offered a critical theoretical construct since 1981, with the publication of two influential articles (Mitchell & Olson, 1981; Shimp, 1981). Following these seminal articles, various studies were dedicated to demonstrating the effects of Aad1 on brand attitudes and purchase intentions (e.g., Gardner, 1985; MacKenzie, Lutz, & Belch 1986; McKenzie, & Lutz, 1989). Other studies show that Aad notably depends on attitudes toward advertising in general (Lutz, McKenzie, & Belch, 1983; Muehling, 1987; MacKenzie & Lutz, 1989; Mehta, 2000).

The emergence of globalization has created more dimensions for researchers to explore the role of advertising in products and services performance including consumers' attitude (Kanso & Nelson, 2007). According to Tai (2007), the advancement of technology enables competitors' easy access to marketing information. Therefore, advertising plays an important role in such situation by developing a strong brand name of the corporation or products. Advertising is a non-personal communication in the structure of information, usually paid for and generally persuasive in nature about products, services or ideas by acknowledged sponsors through an assortment of media (Bovee & Arens, 1992).

3. Methodology Adopted

Preliminary study was done on the first stage, which includes analyzing the secondary data, consultation with officials in the Indian Railways and consultation with advertising agency, research agency and ordinary train travelers.

For the collection of primary data survey was conducted among the railway passengers using schedule and personal interviews. The research was conducted in the railway station closest to the divisional headquarter in Thiruvananthapuram Railway Division, i.e. Thiruvananthapuram Central. Universe consists of Indian Railway passengers at this railway station. Sampling unit is a passenger, who was waiting for a train.

Sampling frame: Since no reliable sampling frame was available except for passengers in the reservation coaches, respondents in the railway station waiting area and platform with valid Indian railway tickets were taken as the sources of information. A sample of 100 respondents in proportion to the average No. of passengers in a month from this station was selected on the basis of purposive sampling. The data has been collected personally with the help of a well structured schedule. After scrutiny of the filled schedule, 86 were found to be fit for analysis; others lacked seriousness in response and hence weeded out. People from all strata of society were included in the survey to make the sample more representative.

Railway digital transit advertising media selected for the study includes digital advertising boards, passenger information digital boards, glow sign box and closed circuit television. Tools for Analysis: Likert scale analysis, Percentage analysis and One-way Analysis of Variance (ANOVA).

4. Results And Discussion

4.1 Demographics

The first part deals with the demographic profile of the respondents such as gender, age, income, marital status, educational status, occupation, place of residence, mother tongue, preferred language for advertising, frequency of travelling etc.. Part two deals with the attitude towards likeability and believability factors of advertising of the sample passengers.

The study reveals that 70% of the respondents were male. It means that males are usually travelling more as part of their job and business. Maximum number of passengers travelling in the train belongs to the age group of 31 – 40, which comprises about 32% of the total respondents and majority are married. The demographics studied also reveals that 38% have either UG/Diploma as their educational qualification and salaried persons are travelling more which comprises 36% of the total respondents. Passengers using railways for their travel are middle income group comprising about 34% of the respondents and majority (68%) is from semi-urban area. When studied the frequency of travelling majority of the passengers are occasional users of railways for their journey which comprises 33% of the total respondents.

4.2 Mean and Percentage Score for Attitude towards Likeability Factor

Stn.	Statements - Mean (percentage score) for Agreement									
	QD_1	QD_2	QD_3	QD_4	QD_5	QD_6	QD_7	QD_8	QD_9	QD_10
Tvm. (n=86)	2.8 (70.1)	1.8 (45.1)	3.23 (80.8)	3.23 (80.8)	3.36 (84)	3.35 (83.7)	3.31 (82.8)	1.38 (34.6)	1.4 (34.9)	1.41 (35.2)

Source : Primary Data

Attitude towards likeability factor of railway digital transit advertising in General (Ag) has been measured with a scale including statements on 5-point Likert Scale.

For assessing that, a score was given for the response to each statement. A score of '0' was given to those who responded strongly disagree, a score of '1' was given to the response disagree, a score of '2' was given to the response no opinion, a score of '3' was given to the response agree and a score of '4' was given to the response of strongly agree. Then mean score for each statements was find out and divided that by maximum score of '4' and multiplied by 100 for getting a percentage score which will represents the percentage of Attitude.

QD_1, "**I Like to Pay Attention to The Advertisements**" under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 70%.

QD_2, **"I Stop for Checking/Reading/ Viewing Advertisements"** under Likeability factor of measurement of attitude towards advertising observed a respondent disagreement with an overall percentage of disagreement score of 55%.

QD_3, **"Advertisements with Creative Ideas Attract My Attention"** under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 81%.

QD_4, "**Advertisements with Vivid Colours and Pictures Atrract my Attention"** under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 81%.

QD_5, **"The Larger-Than-Life Advertisements Attract my Attention"** under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 84%.

QD_6, **"Advertisements which Include Celebrities are more Persuasive"** under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 84%.

QD_7, **"Advertisements are Attractive to the Public**" under Likeability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 83%.

QD_8, **"There Are Too Many Advertisements and they Make People Confused and Annoying"** under Likeability factor of measurement of attitude towards advertising observed a respondent disagreement with an overall percentage of disagreement score of 65%.

QD_9, **"I Ignore Majority of the Advertisements That Exist"** under Likeability factor of measurement of attitude towards advertising observed a respondent disagreement with an overall percentage of disagreement score of 65%.

QD_10, **"The Amount of Advertisements That Exist Are Tiresome"** under Likeability factor of measurement of attitude towards advertising observed a respondent disagreement with an overall percentage of disagreement score of 65%.

4.3 Mean and Percentage Score for Attitude towards Believability Factor

Stn.	Statements - Mean (percentage score) for Agreement				
	QD_11	QD_12	QD_13	QD_14	QD_15
Tvm. (n=86)	3.23 (80.8)	3.21 (80.2)	3.21 (80.2)	3.21 (80.2)	1 (25)

Source: Primary Data

QD_11, "**The Claims Made in the Advertisements Were Original and Believable"** under Believability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 81%.

QD_12, **"I Felt Convinced That I Should Buy the Product**" under Believability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 80%.

QD_13, **"Advertisements will Boost the Sale of the Brand"** under Believability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 80%.

QD_14, **"If I am Deceived by an Advertisement I'd never Purchase a Product from that Company Again"** under Believability factor of measurement of attitude towards advertising observed a respondent agreement with an overall percentage of agreement score of 80%.

QD_15, **"If I am Deceived by an Advertisement I'd Distrust All Other Advertisements Including the Ones that Deceived Me"** under Believability factor of measurement of attitude towards advertising observed a respondent disagreement with an overall percentage of disagreement score of 75%.

4.4 Mean and Percentage Score for each Dimensions of Attitude towards Railway Transit Advertising

Stn.	Mean (percentage score) for Agreement		
	Likeability	Believability	Overall
Tvm. (n=86)	2.43 (60.7)	2.77 (69.3)	2.6 (65)

Source : Primary Data

Table 4.4 indicates the passenger's agreement towards various factors of measurement of attitude towards advertising like Likeability and Believability. Passengers' overall agreement towards attitude towards railway transit advertising has a percentage of agreement score of 65%. This shows that there is a favorable attitude towards railway transit advertising and it is a key indicator to advertising effectiveness. Believability factor has the maximum agreement with a percentage of agreement score of 69.3%, followed by Likeability factor with a percentage of agreement score of 60.7%.

5. Suggestions

The present study is an attempt to understand the transit advertising of railways and its communication-effect. The primary motivation behind this study is that the growth in conventional outdoor media is declining and being replaced by fast growing transit media which is reaching captive audience and the passengers using railways is showing an increasing trend.

The passengers who use railways are dominantly middle income group, married male youth from semi-urban area. They are educated and salaried persons with spending power. The corporate can tap this group by increasing the advertisements in railways for the products and services preferred by this demographic group.

Though there is a favourable attitude towards railway transit advertising which is a key indicator to advertising effectiveness, some additional perceptions are weakening transit advertising's image as well, and therefore may be addressed by the railways: the perception that transit media are not clean and the perception that national brands advertisement are absent. One of the reasons for the absence of national brands is that transit media's image suffers from skepticism about its effectiveness, its reliability, its efficiency and its value for the money. All of these concerns will be addressed if transit media becomes measurable on a continuous basis.

6. Conclusion

The study aims to determine the effectiveness of railway transit advertising by measuring the attitude towards advertising. Findings show the passengers agreement towards the factors of measurement of attitude towards advertising like Likeability and Believability resulting in a favourable attitude towards railway transit advertising and it is a key indicator to advertising effectiveness. This proves that the advertisements done in the transit advertising media vehicles in railways are effective in their communication. In this context, Indian Railways striving hard to make the railway transit advertising one of the mainstream advertising medium, the researcher proposes to try his maximum to make this study a useful and valuable one and is hopeful that it will fill the existing gap and serve as a useful guide for the Indian Railways and the nation.

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DOES THE ORGANIZATION CONTEXT AFFECT PRODUCT INNOVATION? – A DIGITAL PROJECT TEAM LEVEL ANALYSIS

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Abstract

The main purpose of this paper is to investigate the relationship between Organization Context (as explained by performance management and social support) and Product Innovation Outcomes (Radical Innovation, Incremental Innovation and Speed to Market). One of the components of e-business infrastructure is software development which provides the base of the digital economy. The data has been collected from among the project teams of software development companies at Kerala, India. The hypothesis is tested using regression, correlation, mean scores and average of averages. The finding indicates a high positive correlation between organizational context and product innovation and the organization context in software development organization is found to be high performance context. The result of this study could be used by the managers of the software development organizations concerned to improve the performance management and the social support system to maneuver the employees to handle successful innovation projects. The study also throws light on the desirable or the right context to be provided in the organization that can enhance the ability of the business unit to innovate. The results also provide companies operating software development sector in Kerala with useful information on how their policies and actions might affect exploration and exploitation of business unit competences and consequently firm innovation.

Type: Research paper

Keywords

Organisation Context, Product Innovation, Software Development Companies, Ambidexterity

Introduction

Twenty-first century software development organizations undergo fast changes at tremendous speed. Their flexibility, adaptability, stability and survival ensuring product innovation rest on the ability to engage in rapid, relentless and continuous change. External and internal factors contribute to such changes. External factors include rapid technological change, globalization of market, and shrinkage of product lifecycle and enhancing aggressiveness of the competitors. Internal factors triggering change include organization culture, organization context

and organization competence. Intense competition enthuses such organizations to strive for innovation leading to new product development. The research study specifically focuses on the effect of organization context on product innovation among the software development project teams which help develop e-business infrastructure in software development organizations in Kerala.

The term 'Digital Economy' was coined in Don Tapscott's 1995 book *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. The Digital Economy was among the first books to consider how the Internet would change the way we did business. According to Thomas Mesenbourg (2001), three main components of the 'Digital Economy' concept can be identified. They are e-business infrastructure (hardware, software, telecoms, networks, human capital, etc.), e-business (how business is conducted, any process that an organization conducts over computer-mediated networks), e-commerce (transfer of goods, for example when a book is sold online). But, as Bill Imlah comments, new applications are blurring these boundaries and adding complexity; for example, social media and Internet search. Digital economy can be achieved by appropriate Software development.

Organization context is defined as the "often invisible set of stimuli and pressures that motivate people to act in a certain way" (Ghoshal and Bartlet, 1994). *Product innovation* is the development of new products, changes in design of established products, or use of new materials or components in the manufacture of established products (Michael White, Braczyk, Ghobadian, & Niebuhr, 1988; Jerinabi U. & Santhi P., 2012). Product innovation is the conception, development, designing and delivery of software products.

Software development organizations focus on making significant investments toward innovation in product and services. They champion innovation as the key determinant to future their businesses. Smart businesses know that constant innovation is a central strategy towards future- proofing. This is to ensure competitiveness in an extremely dynamic business environment. Software development organizations assume a greater decision making role and responsibility to ensure long term role (Business Line, 2015) for developing a digital economy.

Performance management and social support are the two dimensions of *organization context*. In software development organizations, project teams primarily participate in product innovation. There is immense pressure on the project teams to deliver the error-free output on time. Quite often, there may be technical snags, bugs or malfunctioning of the software developed or installed at the client sites. This may turn out to be highly demoralizing to the project teams. The project teams may expect different types of support from the organizations for their performance.

Project teams may expect that they be directed well, more challenging tasks be assigned to them, mistakes committed be tolerated and better training be provided to them by the top management. They also expect that adequate trust may be provided to the project team by the organization. The

two dimensions of performance management and social support that constitute organization context are studied through project teams. Too much of performance management or social support may be detrimental to the organization. Too much focus on performance management without support and trust from the management may lead to burnout of the project teams. The teams may totally get exhausted and fatigued. This may affect the productivity of the teams and consequently the product innovation may be negatively affected.

Too much focus on social support without adequate performance management and discipline is also equally fatal to the organization. This can lead to a situation where productivity is less but the employees and teams are highly satisfied. This is also an undesirable condition for an organization since innovation is affected. In the organizations where performance management and social support are less, it is also an undesirable situation since product innovation can be low. So there should be an adequate, balanced mix of both these activities for the organization to be productive and innovative. This research is taken up with the intention of identifying and measuring the organization context provided by management for the software development project teams. Only if adequate and appropriate organization context prevailing in the organization is identified, can managers positively intervene to build the organization context to an optimal level where the project teams are intrinsically motivated in terms of challenging tasks and support. This may in turn help the project teams to exploit and explore competences of the business unit and thus enhance contextual ambidexterity. The two components of organization context which are considered for the study are performance management and social support.

Organization Context

It was Sumantra Ghoshal and Chris Bartlett (1994) who were the first to define the organization context. They defined organization context as "*often invisible set of stimuli and pressures that motivate people to act in a certain way*". It is the top management who shapes the context through systems, incentives, controls and actions which they take on a day to day basis and subsequently reinforced through the behaviour and attitude of the employees throughout the organisation. Ghoshal and Bartlett (1994) argued that four sets of attributes-stretch, discipline, support and trust interact to define an organization context. Gibson and Birkinshaw (2004) conducted another empirical study on the contextual factors and further reduced down the four dimensions into two through factor analysis. They are performance management, a combination of stretch and discipline and social support, a combination of trust and support. Performance management is concerned with stimulating people to reach out to the maximum and deliver quality products or outputs. Social support is concerned with providing employees with the security and autonomy they need to perform. Performance management and social support are not independent. These two factors are mutually reinforcing and interdependent. Literatures recognise that a strong presence of both creates a high performance context which in turn is a true facet of ambidextrous

organization (Gibson and Birkinshaw, 2004). In other words, ambidextrous organizations are characterised by high performance context and higher the high performance context, higher is the contextual ambidexterity i.e. the exploitation and exploration of the competence of business unit. They further clarify that a less optimal organization context will occur, if there is an imbalance in these organizational characteristics or the lack of both. Also the leaders or the managers in the business unit develop contextual ambidexterity when they are backed by a supportive environment.

In their study, it is emphatically cited that "a highly demanding, result driven orientation that lacks social support will create burnout context". People who work in such a scenario get exhausted after some time and are depersonalized and the autocratic governance will enhance the employee turnover making the organization less ambidextrous. On the other hand "a strong social support without high performance expectation will engender a country club context" where in employees enjoy a comfortable lenient collegial environment but fail to enhance productivity to the maximum.

Product Innovation

Product innovation is defined by Damanpour (1991), as new products or services introduced to meet an external user or market need. Product innovation is defined as the development of new products, changes in design of established products, or use of new materials or components in the manufacture of established products (Michael White, Braczyk, Ghobadian, & Niebuhr, 1988; Jerinabi U. & Santhi P., 2012). Product innovation is the creation and subsequent introduction of a set of goods or service that is either new or improved on previous goods or services. This is broader than the normally accepted definition of innovation to include invention of new products which, in this context, are still considered innovative.

Objective of the study

To find out the relationship between Organization Context and Product Innovation.

Hypothesis

There exists relationship between organization context and product innovation.

Population and sample

The population for the study consisted of the project teams in the software development organizations at Ernakulam and Trivandrum, Kerala. To reflect the differences anticipated in the heterogeneity of the project team, the nature of the project undertaken and to have a full coverage of all elements of the population, it was decided to adopt a census survey. Hence it was requested to distribute the questionnaires to 314 project teams to get their responses. Out of 314 questionnaires distributed, only 264 were received. The response rate was 84%. 14 questionnaires were discarded on account of missing values. Thus the final number of utilizable responses for analysis was 250.

A self designed questionnaire with the items from three standardized instruments, which was culturally adapted were used for collecting the information.

Pre-testing

The pretesting phase which was the initial phase of the design of instrument consisted of two stages. i) Preliminary study for checking the reliability and variability of the dependent variable and ii) Pilot study conducted to check the reliability and validity of the instrument. After those two stages the questionnaire for this study was finalized.

Preliminary study

Preliminary study is done for checking variability and reliability of the dependent variable.

Reliability and variability of the dependent variable

a) Checking the variability of dependent variable

The study on the variation in dependent variable was pertinent in the research study because if the result showed that there was no variation in the dependent variable, the problem itself would have become irrelevant. Only if there is variation in the dependent variable, can the problem itself have the scope of being further investigated as to know the reasons or causes for such variations? A preliminary study was conducted among 30 project teams of four business units of NEST Information Technologies Ltd., which is a major software development organization situated at Ernakulam and Trivandrum to find out the extent of variation in the dependent variable. At first, total of the eight items of the dependent variable from the instrument by Wang and Rafiq (2012) in the article "Ambidextrous Organization Culture, Contextual Ambidexterity and New Product Innovation: A comparative study of UK and Chinese firms" was taken for the study. Two items belonged to radical innovation, two to incremental innovation and four to speed to market. Additional items were added on expert advice. There were altogether 20 items in the dependent variable to be tested for variation.

Discrimination value of the dependent variable- Product Innovation (PI)

The discrimination value of the dependent variable product innovation was found out by doing item analysis. Item analysis was not done with any of the independent variables since the items have been taken as such from three standardized instruments.

Pilot study

In the second stage of pretesting, a pilot study was conducted for testing the appropriateness of the research questions and for checking the reliability and validity of the research instrument. The pilot study was conducted with a pre designed standardized questionnaire on 55 project teams of business units of NEST Information Technologies Pvt. Ltd. Through the pilot study the reliability and validity of the whole instrument was established.

Analysis and Interpretation

Sample Profile

Project teams in software development organizations represent the sample in the study. Sample profile shows the classification of project teams based on designation and software development unit size. Table 1 shows classification of the project teams based on designation.

Sample Profile

Table 1 Role/Designation of respondents in the project team

	Frequency	Percentage
Project Leaders	131	52.4
Project Managers	119	47.6
Total	250	100.0

Role/Designation is an important variable in the study as these are the people who are actually responsible for project teams which implement/develop innovative softwares in the organization. Hence the respondents namely project managers/project leaders were asked to indicate the designation category by selecting that designation which they belong to. Information is collected from 131 project managers and 119 project leaders which constitute 52.4% and 47.6% of total respondents.

Relationship between organization context and product innovation

The hypothesis to be tested here is, There is a relationship between organization context and product innovation.

Table 2: Model Summery

r - value	R Square	Durbin-Watson	F - value	p - value
0.466	0.217	1.193	68.622	0.000

This table shows that the organization context and product innovation are highly correlated ($r = 0.466$ with $p < 0.01$). That is, as organization context increases, product innovation is also increases. Correlation is a measure of linear relationship only and to quantify the strength of the relationship between the variables, whereas regression expresses the relationship in the form of an equation.

Here the R square was reported to be 0.217, which means 21.7% of the variance in product innovation is addressed by the predictor variable organization context. The Durbin-Watson statistic is used to test for the presence of serial correlation among the residuals. Here, the value of Durbin-Watson is 1.193, approximately equal to 2, indicating no serial correlation. From the ANOVA, it was found to be significant with $F = 68.622$ and $p<0.01$. Hence we reject the null hypothesis and conclude that the regression is valid.

Thus we can conclude that *there is a significant positive relationship between organization context and product innovation in software development organizations.*

Scatter plot showing the relationship between Organization Context and Product Innovation

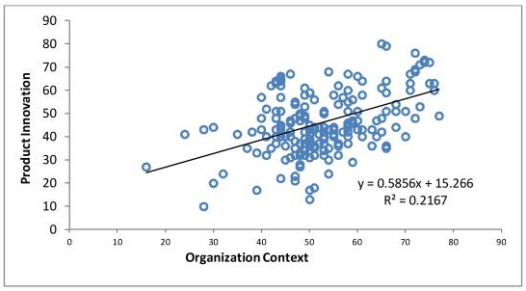

Table 3 Coefficients

	Unstandardized Coefficients		Standardized Beta	t - value	p - value
	Beta	SE			
Constant	15.266	3.749		4.072	0.000
Organization Context	0.586	0.071	0.466	8.284	0.000

Here both beta values are found to be significant as the corresponding p-values are less than the significant level 0.01. Then the regression equation explaining the relation between organization context and product innovation can be written as

$$PI = 15.266 + (0.586 * OC)$$

Descriptive Statistics of Product Innovation

The scores of mean, median, standard deviation and mean percentages of product innovation and its sub variables such as radical innovation, incremental innovation and speed to market are shown below**.**

Table 4 Descriptive statistics of product innovation

	Mean	Median	SD	Mean %	Mid value	Category
Radical Innovation	10.67	10.00	4.00	53.4	11.00	Average
Incremental Innovation	12.61	13.00	4.08	63.1	11.00	High
Speed to Market	22.34	22.00	7.57	55.9	22.00	High
Product Innovation	45.63	44.00	13.73	57.0	44.00	High

Interpretation: The radical innovation has the mean score 10.67 and mean percentage score of 53.4%, the incremental innovation has a mean score and mean percentage score of 12.61 and 63.1%, the speed to market has the mean score of 22.34 and mean percentage score of 55.9%. Product innovation has the mean score of 45.63 and the mean percentage score of 57.0%.

The table shows that radical innovation is average having the mean score (10.67) the mid value (11.00) are approximately the same. Incremental innovation is high since the mean score (12.61) falls above the mid value (11.00). Speed to market is high since the mean score (22.34) is more than the mid value (22.00).

Table 5 Descriptive Statistics of Organization Context

	Mean	Median	SD	Mean %	Mid value	Category
Performance Management	29.26	29.00	6.97	69.7	24.00	Very high
Social Support	22.53	22.00	6.17	64.4	20.00	High
Organization Context	51.79	50.00	11.08	67.3	44.00	High

From the above table it could be seen that the extent of existence of *Performance management* is *very high* since the mean score 29.26 is very much higher than the mid value (24.00) and *social support* is also *high* since the mean score (22.53) falls above the mid value (20.00).

Hence it is established that the software development organizations at Kerala has a *high performance context* since both performance management and social support are high, which tells that software development organizations *are ambidextrous*.

When comparing the mean percentages scores of the two dimensions of organization context also, it is found that the performance management score (69.7) is more than the social support (64.4). In short, the organization context is high performance context. Individually, the score of organisation context shows that its presence in software development organizations is high having the mean score (51.79) higher than the mid value (44.00).

Gibson and Birkinshaw, 2004 reiterates that only those organizations with high performance context are ambidextrous and

that those with high performance management and high social support have a high performance context. When comparing the mean percentages scores also, it could be found that the presence of performance management is more than the social support. In short the organization context is high performance context. Individually, the score of organization context is also high.

Analysis on Organization Context

The organization context existing in the software development organizations in terms of performance management and social support is estimated as follows

Table 6 Analysis on organization context

	Performance Management	Social Support	Category
Software development organizations	4.876	4.507	High Performance Context

Key Findings on Analysis on Organization Context of the Software Development Organizations

1) It is found that existence of *performance management* is *very high* since the mean score (29.26) is very much higher than the mid value (24.00) and *social support* is also *high* since the mean score (22.53) falls above the mid value (20.00). Hence it is established that the software development organizations have a *high performance context* since both performance management and social support are high, which tells that software development organizations as a whole are *ambidextrous*.

2) When comparing the mean percentages scores of the two dimensions of organisation context, it is found that the performance management score (69.7) is more than the social support score (64.4). In short, the organization context is high performance context. Individually, the score of organisation context shows that its presence in software development organizations is high having the mean score (51.79) higher than the mid value (44.00).

3) By taking average of averages of the scores of the project teams, performance management dimension (4.876) is found to be more than the social support factor (4.507) which shows the presence of high performance context in the software development organisations.

4) There is a high relationship between organization context and product innovation.

Conclusion

The focus of this study was to find the relationship between organization context and product innovation. Since there is a high correlation between organization context and product innovation, the managers could provide the right kind of context with high performance management and social support context so that product innovation is boosted. The project teams are motivated which could be inferred from the social support being high in the organization.

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DIGITAL FINANCIAL INCLUSION IN INDIA

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Abstract

The article aims to assess the process of financial inclusion in India. Various kinds of disparities exist in the Indian society. It can be based on caste, class, region and much more. The government of India has been planning to overcome these barriers to bring about a complete financial inclusion in the Indian society. With the advent of Aadhar Cards, the digitalization of financial institutions has become more real than ever. It is one of the biggest biometric identity cards around the world. However, the biggest challenge for the government is to include the entire population in this digitalization scheme. Getting the Aadhar card for everyone is just the beginning, linking it to the bank accounts of the people is the second step. Moreover, getting a bank account for everyone is also an essential step because traditionally, the people who are from the lower-income group were not involved in the banking services. Hence, this digitalization of financial institutions needs to be accompanied with financial education for the people because they would not be a part of the digitized economy if they are not given a proper education regarding financial literacy. Mobile phones are playing an important role in making the digitalization process more inclusive. With the boom in mobile phones and data network, even the smallest and the most remote areas in India have access to mobile phones. Even if internet or smartphones are not available, simple mobile phones with a network can access financial services. The age-old methods of cash-based transactions are outdated now. The use of simple mobile phones with the messaging facility is enough for making a simple transaction. But it must be noted that the people who are newly included in the banking services and digital services are more vulnerable to cybercrimes. Hence, safeguards must be put in place to track the payments in case such issues arise. There should also be a means to educate people against fraudulent behavior that has become fairly popular in recent times. Finally, the paper looks at the future of digitalization of financial institutions in India and its hope to bring stability to the economy.

Keywords

Financial inclusion, digitalization, Aadhar card, inclusion, financial inclusion in India

Introduction

Digital Financial inclusion in India refers to the process of including people from all the sections of the society into digital financial services like banking services. The government of India plans to digitalization all the government services so that it can easily reach to all the citizens of India living in any corner of the world. However, in order to make the financial inclusion possible, it is important that people from all the sections have a basic understanding of these services. There is no doubt that the more significant aim of digitalization of finance is to make the government services more efficient and easily available for everyone. The government of India has already been working for financial inclusion since the last few decades, and with the aim of digitalization, the need is growing even more. The digital financial services have four broad groups that are based on who is holding the contracts of the customers. The four categories are, firstly, a full-service bank that offers "basic" or "simplified" transaction services for their payments, transfers or mobile payments, etc. Secondly, they provide a limited-service offering in banking with accounts through mobile devices and payment cards. The third is a mobile network operator or e-money issuer. The next in line is a non-bank or a non-e-money issuer.

Moreover, in present times, the idea is to reach millions of new customers who don't already use banking services and bring about digital financial literacy. Therefore, all the banks and non-banks are taking efforts to provide financial services to people who were initially financially excluded. They are trying to build approaches that can help them in understanding the digitized process that can lead to inclusion. Some of the innovations to make the digital financial services more inclusive is the extensive use of mobile phones. Currently, almost everyone has access to phones in every nook and corner of the country. So the possibility of using mobile phones for accessing financial services can be very inclusive.

With the extreme accessibility and affordability of mobile phones, millions of poor customers are now able to move towards digital transactions. They are able to do away with the age-old cash-based transactions. There is a long way to go in this field, but it is an excellent step towards bringing about economic stability in the country. However, the digitalization of finance must also keep the security and safety measures in mind. If people from the lower strata who are not used to the new technology start using it, there are chances of them getting cheated by anti-social elements of the society. Therefore, it is imperative that proper security measures and laws are in place to safeguard their interests.

Aadhar Card: A Plan to Identify 1,200 Million people:

Since 2012, the government of India is in the process of introducing a digital national identity system, starting from scratch, for approximately 1.2 billion people. This digital identification uniquely registers individuals based on the demographic and biometric information. Thus, this ambitious plan will provide citizens with a means to clearly and automatically prove their identity before the public and private organizations throughout India.

The Aadhaar Card

Known as the Aadhar Card, it is currently the most extensive biometric identification program in the world. It assigns a twelve-digit identification number to each Indian citizen. The identifications are issued by the Unique Identification Authority of India (UIDAI), which stores an enormous amount of information that is digitally accessed and interconnected with all the important institutions in India, both private and public. For example, the Aadhar card can help poor residents easily identify with banks. As a result, banks will be able to expand branchless banking and reach a more significant segment of the population at a lower cost. To date, UIDAI has issued close to 900 million identifications.

Biometric Information Anywhere

The goal of the biometric pattern recognition scheme is the automatic and reliable determination of personal identity through the analysis, coding, and matching of individual personal characteristics. The solution for the reliable identification of the entire population is to record the biometric data - such as the iris and fingerprints - of each Indian, store them centrally and link them to a unique 12-digit number. The number always identifies the person, so that it can be invoked anywhere, through biometric authentication in the central database.

One of the most interesting aspects of this plan is that each person who registers is first compared biometrically with all the persons already registered to detect if there are duplicate identities, in order to avoid fraudulent access to various benefits provided by the law. This check for 'reduplication' requires a colossal workflow (storage and IT processes) that grows as the size of the comparison database increases exponentially.

A Model to Take Into Account

An efficient and economical payment solution is an urgent need to promote financial inclusion. The Aadhar card and the authentication mechanism that accompanies it, together with the application of rudimentary technology, can provide the desired solution for micropayments. This could allow economic access to financial services for everyone.

The Aadhar card ('Aadhar' means 'platform' in 22 of the Indian languages) becomes a digital center for financial inclusion. It can be used to create a bank account for people who do not have it. In rural areas where there are no bank branches, the government is installing millions of the so-called 'automatic micro card machines', which will be complemented by correspondent agents who will dispense cash to the inhabitants of small towns using the authenticated Aadhar card numbers, in combination with inter-bank counter-transfers online to the correspondent agent's account.

There are three fundamental aspects of the Aadhar program for financial inclusion. First, this digital approach means an evolution from the simple prepaid transactional account to a second step that integrates the identity and the financial infrastructure. Citizens have the right to purchase a prepaid card linked to their

Aadhar card and use those cards to receive monetary, social assistance. The card can be reloaded through the participating banks.

Second, it addresses the regulatory banking requirement of customer knowledge (KYC). Thanks to the strong authentication that Indian digital identification aims to offer, the documentation normally required of the poor to open a bank account can be drasticallyreduced. Thus, digital identification reduces costs for banks by lowering the high costs of customer acquisition, operations costs and fixed technological costs, which they would normally have to face from both the financial systems and customers.

The Future

Increasing access to and use of financial services in segments that are underserved or excluded from the formal system is currently understood as a necessary condition for social inclusion. Under this statement, the growing impulse and support for financial inclusion proliferated in our country from the BCRA and in the world from the most diverse governments, organizations and actors is justified. However, this premise is accompanied by the note that these financial services must adjust to the needs of the customers and ensure good use by them.

If this scenario is met, financial inclusion can improve the welfare of companies and families by increasing their opportunities to see their projects materialized (not only of investment but also in human capital) and thus, promote economic growth and sustainable development, helping to reduce poverty. Beyond the promise of the statement, experience tells us that financial inclusion allows achieving greater welfare only when users have the appropriate knowledge and skills of the products and services offered.

In our country, the recent evolution of the regulatory framework and the promotion of the inclusive development of the sector has been phenomenal. It has been done through measures such as:

1) Simplified savings accounts and free debit cards
2) The authorization of the electronic deposit of checks via cell phones
3) The authorization for the opening of savings banks, current accounts and credit cards to minors under 18
4) The permissibility of any commercial entity to acquire ATMs without having to associate with a bank, among many other initiatives.

However, the protagonists have been the new digital payment platforms and the regulations to use the mobile phone as a financial tool. In this way, the momentum of the Mobile Payment Platform (through which financial institutions must offer the Immediate Electronic Payment method) and the implementation of the POS-Mobile, the Payment Button, the Electronic Wallet, the Alias CBU, the DEBIN along with the current evaluation of launching electronic checks, open the way to an unknown scenario for local banks.

As a result, we observed the recent announcements of the first fully digital banks in the country (TSA Banking and Wanap) competing directly with the traditional

system. These initiatives should not (as happened) alarm only banks but also, and mainly, the public sector promoter. It happens that these transformations are only the initial materialization of a global phenomenon in full gestation.

For example, by the end of the year, WhatsApp plans to launch a payment service in India in partnership with the Unified Payments Interface (UPI) payment system. Thus, it calculates to facilitate the access to financial services to more than 200 million users of the application. Facebook, meanwhile, already introduced in 2016 a payment system through the cell phone that is currently available in the US. Apple has been promoting its Apple Pay wallet for years. Likewise, the report recently published by the IDB and Finnovista surveying the exponential growth of FinTech in Latin America (currently 703 ventures in 15 countries), where three out of five were established between 2014 and 2016 and one in four operates as alternative platforms of financing, show that this is only the beginning.

Consequently, the accelerated process of transformation that the financial sector is going through in the world and our country implies a call to attention about the risks and challenges that the new context entails. The old status quo of commercial banking is suddenly being transfigured by the FinTech revolution, which implies a challenging scenario for regulators and promoters of financial inclusion.

A responsible financial inclusion should advocate with greater emphasis on client protection, helping to reduce the complexity of financial decisions that often keep individuals from making efficient and optimal decisions, but also fostering the financial capacities necessary to manage the risks of over-indebtedness and cessation of payments (which generate a de facto financial exclusion).

Conclusion

The government is taking constant steps to improve access to smartphones and digital banking for all sectors of the society. The advent of Aadhar cards and the continuous initiatives on the part of the government to attain a fully digitalized economy and include financial inclusion in India is no doubt showing signs of progress. The fruits of labor are before us with the linking of Aadhar card with banks, PAN cards, and practically everything today. What's left to be seen is whether or not this financial stability in the form of the mighty Aadhar card will bring the much-needed economic security and stability in India in addition to digitalization reaching all sectors of the society including those from the impoverished and the less privileged areas.

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MARKETER'S OPINION TOWARDS SOCIAL MEDIA MARKETING IN KERALA

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Abstract

Social media marketing *is the use of social media platforms and websites to promote a product or service. Most of these social media platforms have their own built-in data analytics tools, which enable companies to track the progress, success, and engagement of ad campaigns. To use social media effectively, firms should learn to allow customers and Internet users to post user-generated content (e.g., online comments, product reviews, etc.), also known as "earned media", rather than use marketer-prepared advertising copy. While social media marketing is often associated with companies, as of 2016, a range of not-for-profit organizations and government organizations are engaging in social media marketing of their programs or services. Thus this study aims to throw light on how marketers are perceiving the social media marketing and analyzing the future of it.*

Keywords

Social Media Marketing, Earned media, social media sites

Introduction

Social media marketing programs usually center on efforts to create content that attracts attention and encourages readers to share it with their social networks. A corporate message spreads from user to user and presumably resonates because it appears to come from a trusted, third-party source, as opposed to the brand or company itself. Hence, this form of marketing is driven by word-of-mouth, meaning it results in earned media rather than paid media. Social media has become a platform that is easily accessible to anyone with internet access. Increased communication for organizations fosters brand awareness. Additionally, social media serves as a relatively inexpensive platform for organizations to implement marketing campaigns.

Statement of the Problem

Social media marketing is gaining its importance now a day. Every small boutique to big business institutions is now interested to use this medium to increase their sales. It is in this context, a study is being conducted to evaluate the perception of marketers towards the concept social media marketing. A study like this will help the marketers to understand which is the most used social media marketing site and will also help the

customers in identifying the various scope of social media marketing. It will help the marketers to take appropriate decisions also.

Objectives

The major objectives of the study include

1) To analyse how marketers are using social media marketing to grow their business.
2) To evaluate various social media marketing sites and their functions.
3) To study the future trend of social media marketing from marketers perspective.

Methodology of the Study

1) Data collection:- Both primary and secondary data were used for the study. Primary data were collected through a structured questionnaire which is send to marketers through online. The secondary data were collected through books magazines and journals.
2) Universe and Sampling:- The universe for the study consists of all the marketers who are using social media marketing as part of their marketing strategies in Kerala. For a convenience a sample study was conducted among 50 marketers who are using social media marketing as one of their marketing strategy. A convenience sampling techniques was adopted to select the samples.
3) Data analysis and interpretations:- The collected data were analysed using percentage. Pie chart is used to present the data graphically.

Social networking websites

Social networking websites are based on building virtual communities, that allow consumers to express their needs, wants and values, online. Through social networking sites, companies can keep in touch with individual followers. This personal interaction can instill a feeling of loyalty into followers and potential customers. In 2014, over 80% of business executives identified social media as an integral part of their business. Business retailers have seen 133% increases in their revenues from social media marketing. Unlike traditional media, a social media strategy does not require big budgeting. Major platforms are:-

Google+:- Google+, in addition to providing pages and some features of Facebook, is also able to integrate with the Google search engine. Other Google products are also integrated, such as Google Adwords and Google Maps.

LinkedIn:- It is a professional business-related networking site, allows companies to create professional profiles for themselves as well as their business to network and meet others. Members can use "Company Pages" similar to Facebook pages to create an area that will allow business owners to promote their products or services and be able to interact with their customers.

Twitter:- Twitter allows companies to promote their products in short messages known as tweets limited to 140 characters which appear on followers' Home timelines. Tweets can contain text, Hash tag, photo, video, Animated GIF, Emoji, or links to the product's website and other social media profiles, etc.

Facebook:- Facebook pages are far more detailed than Twitter accounts. They allow a product to provide videos, photos, and longer descriptions allows companies to create professional profiles for themselves as well as their business to network and meet others. LinkedIn provides its members the opportunity to generate sales leads and business partners. Members can use "Company Pages" similar to Facebook pages to create an area that will allow business owners to promote their products or services and be able to interact with their customers.

WhatsApp :- WhatsApp started as an alternative to SMS. Whatsapp now supports sending and receiving a variety of media including text, photos, videos, documents, and location, as well as voice calls. It is used to send personalised promotional messages to individual customers. Still, Whatsapp doesn't allow businesses to place ads in their app.

Yelp:- Yelp consists of a comprehensive online index of business profiles. Businesses are searchable by location. Business account holders are allowed to create, share, and edit business profiles. They may post information such as the business location, contact information, pictures, and service information. The website further allows individuals to write, post reviews about businesses, and rate them on a five-point scale.

Foursquare:- Foursquare is a location-based social networking website, where users can check into locations via a Swarm app on their smartphones. Foursquare allows businesses to create a page or create a new/claim an existing venue.

Instagram:- Instagram provides a platform where user and company can communicate publicly and directly, making itself an ideal platform for companies to connect with their current and potential customers.

You Tube:- YouTube is another popular avenue; advertisements are done in a way to suit the target audience. Also, the ads on this platform are usually in sync with the content of the video requested. Certain ads are presented with certain videos since the content is relevant. Promotional opportunities such as sponsoring a video is also possible on YouTube.

Social bookmarking sites:- Websites such as Delicious, Digg, Slashdot, Diigo, Stumble upon and Reddit are popular social bookmarking sites used in social media promotion. Each of these sites is dedicated to the collection, curation, and organization of links to other websites that users deem to be of good quality.

Blogs:- Blogs allow a product or company to provide longer descriptions of products or services, can include testimonials and can link to and from other social network and blog pages. Blogs can be updated frequently and are promotional techniques for keeping customers.

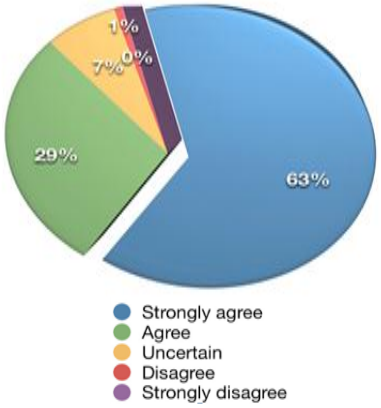
Tumblr:- Rather than relying on simple banner ads, Tumblr requires advertisers to create a Tumblr blog so the content of those blogs can be featured on the site.

Analysis and Interpretation

A structured questionnaire was send online to the selected marketers to measure the perception. The analysis of the data is given below

Whether Social media is important or not

As an emerging marketing strategy social media marketing is gaining importance. Hence marketers are asked to give suggestion on whether social media marketing is important or not. A significant 92% of marketers said that social media was important to their businesses.

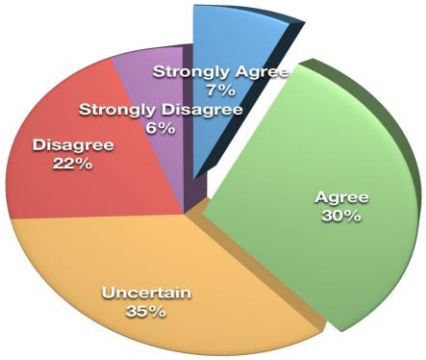


Years of using social media marketing

The participants are asked how long they've been using social media marketing. Fifty-six percent of marketers surveyed have at least two years of social media marketing experience.

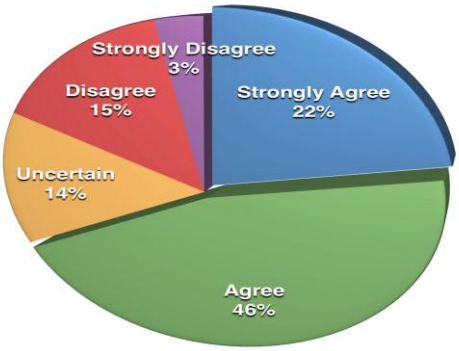
Measuring social media ROI

Any marketing strategy will be successful if their results are measured successfully. To understand marketers' ability to measure their social media activities, they are asked to rate their agreement with the following statement: "I am able to measure the return on investment (ROI) for my social media activities."Only about one in three (37%) agreed they are able to measure their social activities.



Analyzing social media

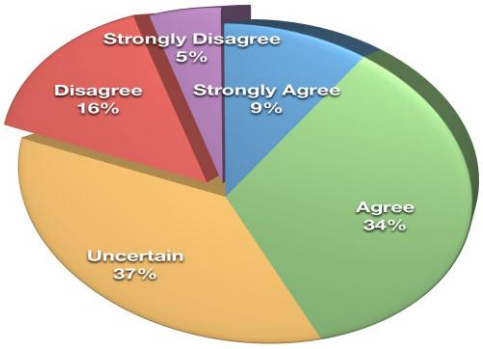
To understand marketers' ability to analyze their social media activities, marketers are asked to rate their agreement with the following statement: "I regularly analyze my social activities."A significant 68% of marketers surveyed analyze their social media activities.



Effectiveness of Facebook marketing

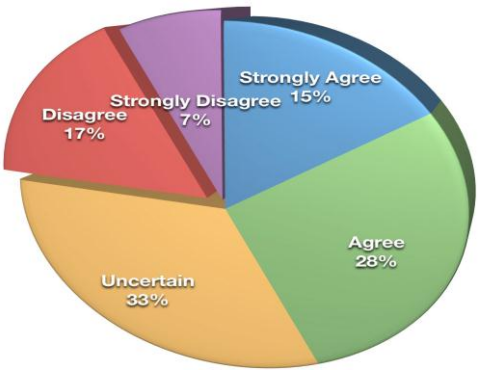
Marketers are asked if they agreed with the statement: "My Facebook marketing is effective." Only 43% of marketers feel like

their Facebook efforts are working. However, most marketers either don't know or indicated that their Facebook marketing is NOT working.



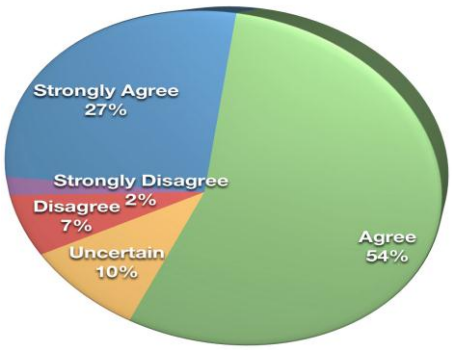
Mobile-optimized blogs

Marketers who had blogs were asked to rate their agreement with the following statement: "My blog is optimized for mobile readers." Forty-three percent of marketers surveyed have a mobile-optimized blog.



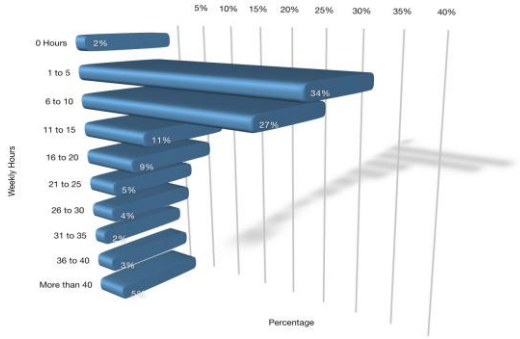
Integrated social activities

Marketers were asked to rate their agreement with the following statement: "I have integrated social media into my traditional marketing activities."Eighty-three percent of marketers agreed that they had integrated their social media and traditional marketing activities.



Weekly time commitment for social media marketing

A significant 64% of marketers are using social media for 6 hours or more and 37% for 11 or more hours weekly. It's interesting to note that nearly 19% of marketers spend more than 20 hours each week on social media.



The experience factor

There's a direct relationship between how long marketers have been using social media and their weekly time commitment. For people just beginning with social media (less than 12 months of experience), 51% spend 5 or fewer hours per week. However, of folks who have been doing this for 2 years or longer, at least 65% spend 6 hours or more per week on social media activities.

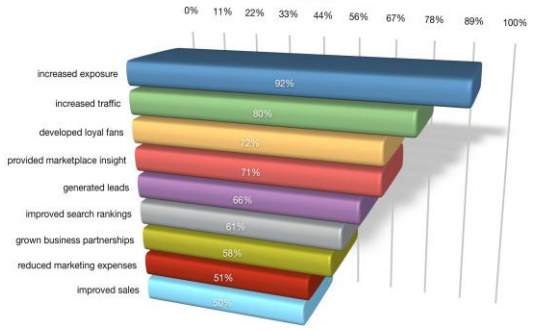
Age factor

There's a direct relationship between a marketer's age and the time spent marketing

with social media. The younger the marketer, the more time he or she spends on social media. Of those spending more than 40 hours per week doing social media marketing, 68% are under the age of 40.

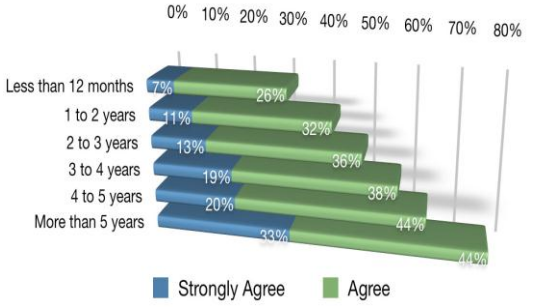
Benefits of social media marketing

The top two benefits of social media marketing are increasing exposure and increasing traffic. A significant 92% of all marketers indicated that their social media efforts have generated more exposure for their businesses. Increasing traffic was the second major benefit, with 80% reporting positive results. Most marketers are using social media to develop loyal fans (72%) and gain marketplace intelligence (71%).



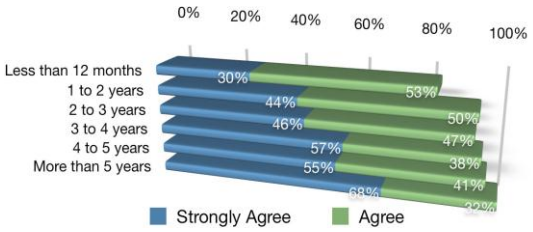
Improved sales

It takes time to develop relationships that lead to sales. However, a large percentage of marketers who take the time find great results.



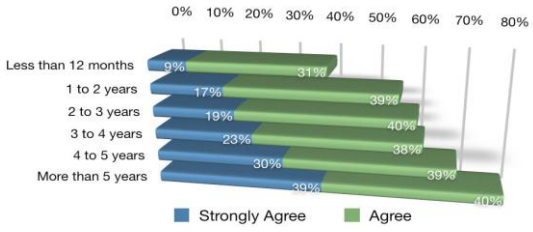
Increased exposure

With as little as 6 hours per week, the vast majority of marketers (95%+) indicated their social media efforts increased exposure for their businesses. Nearly all marketers (93%+) who've been employing social media marketing for one year or longer report it generates exposure for their businesses



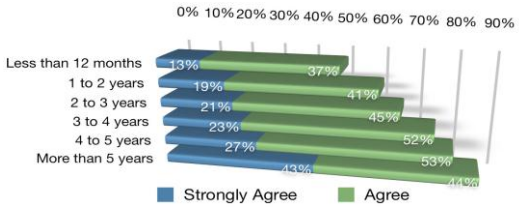
Grew business partnerships

The more time marketers invest in social media, the more they gain business partnerships. More than half of marketers who've invested at least 1 year in social media marketing report that new partnerships were gained. More than half of those investing as little as 6 hours per week in social media were able to build new partnerships.



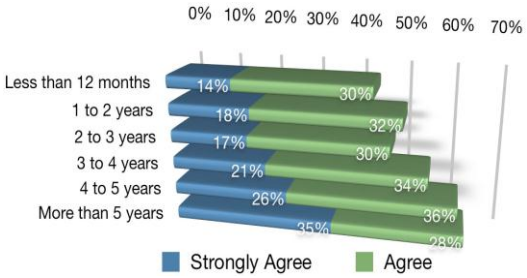
Generated leads

By spending as little as 6 hours per week, 66%+ of marketers see lead generation benefits with social media. More than half of marketers with at least one year of social media experience were generating leads with social platforms



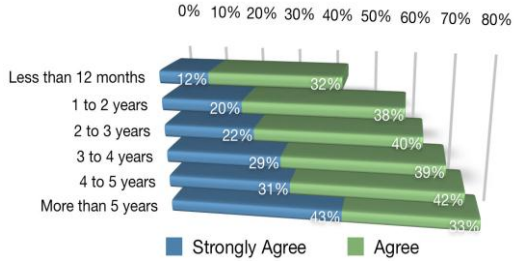
Reduced marketing expenses

Nearly half of those who spend at least 6 hours per week on social media efforts saw a benefit of reduced marketing expenses.



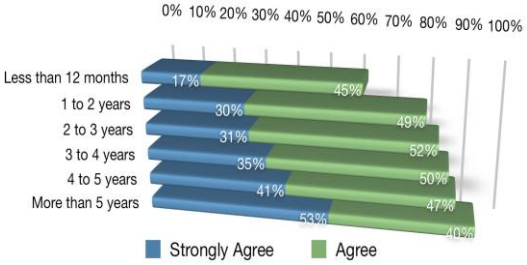
Improved search rankings

Improved search engine rankings were most prevalent among those who've been using social media for one year or longer, with 58%+ reporting a rise. At least 60% of those investing a minimum of 6 hours per week in social media marketing saw improvements in search engine rankings



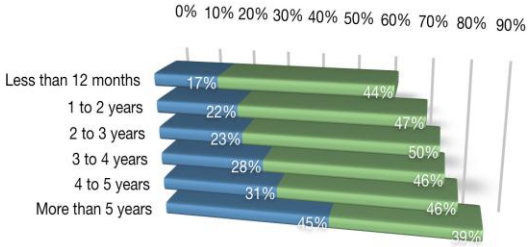
Increased traffic

A significant 84%+ of participants found that increased traffic occurred with as little as 6 hours per week invested in social media marketing. And those who've used social media for 1 year or more reported substantially better results (79%+ reported benefits) compared with those with less experience.



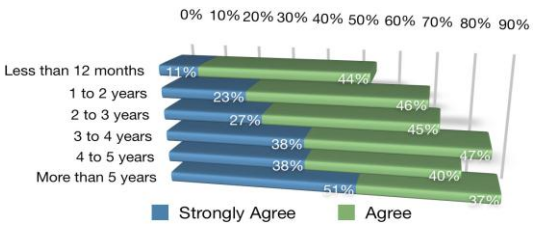
Provided marketplace insight

Of those with at least 1 year of experience, 69% or more found social platforms provided marketplace insight. At least 74% of those spending at least 6 hours per week were more likely to gain marketplace insight.



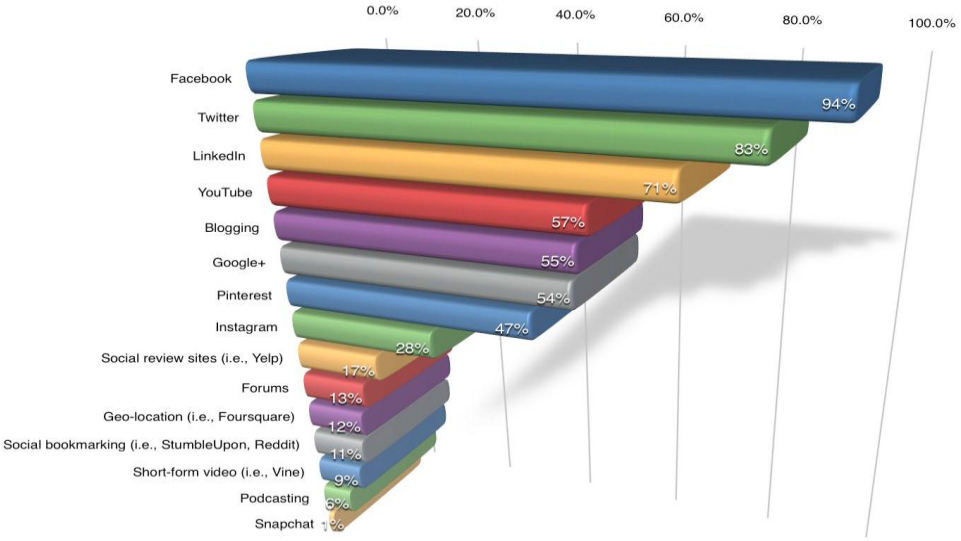
Developed loyal fans

Of those who have been using social media for at least 1 year, 69% found it useful for building a loyal fan base. Time invested makes a difference. Of those spending at least 6 hours a week, 78% found benefit compared to 56% of those spending 5 hours or fewer per week.



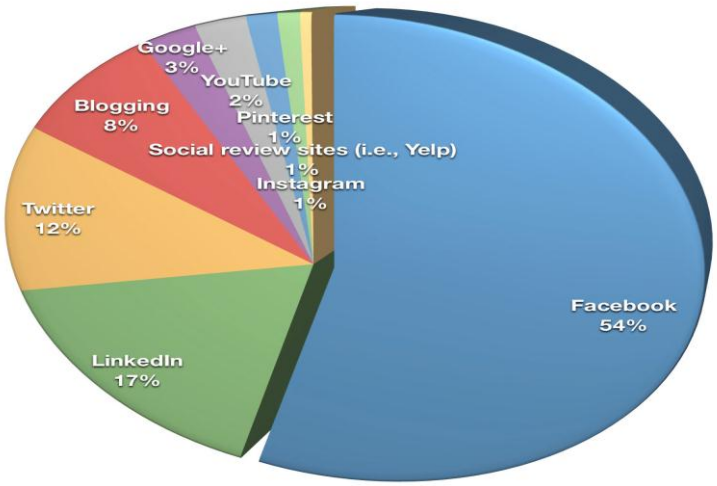
Commonly used social media platforms

Facebook, Twitter, LinkedIn, YouTube, blogging, Google+ and Pinterest were the top seven platforms used by marketers, with Facebook leading the pack. All of the other platforms paled in comparison to these top seven.



The most important social platform for marketers is...

Marketers were asked to select the single most important social platform for their business. More than half of marketers (54%) chose Facebook as their most important platform, followed by LinkedIn (17%), Twitter (12%) and then blogging (8%). This chart clearly reveals Facebook is the powerhouse platform for marketers. However, it is interesting to note the importance of blogging.



How will marketers change their future social media activities?

Marketers were asked to indicate how they will change their social media use in the near future. Respondents were asked to indicate whether they will increase, decrease, remain the same or not utilize various social media channels. Marketers plan on increasing their use of blogging (68%), YouTube (67%), Twitter (67%), LinkedIn (64%) and Facebook (64%), in that order. A significant 85% said they have no plans to utilize Snapchat. Sixty-eight percent have no plans to utilize geo-location.

#1: Blogging:-. Blogging is now to the top spot for increased activity.

#2: YouTube:- A significant 67% of marketers plan on increasing their YouTube marketing.

#3: Twitter:- A majority of marketers (67%) will increase their activities on Twitter,

#4: LinkedIn:-A significant 64% of marketers plan on increasing their use of LinkedIn.

#5: Facebook:- The study shows the beginning of a decline in the use of Facebook among marketers. Also, 7% of marketers plan on decreasing their use of Facebook. However, as shown earlier, Facebook is still the most important social network to most marketers. Only 4% of marketers surveyed do not plan to utilize Facebook.

#6: Google+:- Google+ is on the radar for many marketers. Most businesses (61%) plan on increasing their Google+ activities, and slightly more than 1 in 5 have no plans to use Google+. **#7: Pinterest:-** Half of marketers plan to increase their use of Pinterest.

#8: Instagram:- Forty-two percent of marketers plan to increase their use Instagram

#9: Short-form video (i.e., Vine):- More than a third of marketers (35%) plan on increasing their use of short-form video services like Vine in the marketing.

#10: Forums:- 29% planned on increasing activities and 47% had no plans to use forums.

#11: Podcasting:- 21% plan on getting involved this year.

#12: Social review sites (i.e.,Yelp):- Only 21% of marketers plan on increasing activities on social review sites like Yelp.

#13: Social bookmarking:- A mere 18% of businesses plan on increasing their social bookmarking activities with sites like StumbleUpon, while 64% have no plans to use social bookmarking.

#14: Geo-location:- Only 12% of marketers plan on increasing their use of geo location services.

#15: Snapchat:- A significant 85% of marketers have no plans to use Snapchat. Only 7% of marketers plan on increasing their activities on Snapchat.

Findings and Suggestions

Findings

1) 92 percent of the respondents are of the opinion that social media marketing is important.
2) 56 percent of the respondents were using the social media marketing for the last two years.

3) Only 37 percent of the marketers are able to measure the return on investment in social media activities.

4) 68 percent of the respondents are regularly analyzing their social media marketing activities.

5) 43 percent of the marketers feel that their face book efforts are working.

6) 41persent of the respondents are able to optimize their blog for mobile readers.

7) 83 percent of the respondents are able to integrate their social media activities with traditional marketing activities.

8) A majority of 64 percent of the marketers on social media marketing spent 6 hrs / week for successful results.

9) There is a direct relationship between a marketers age and time spend for marketing with social media.

10) The top two benefits of social media marketing are increasing exposure and increasing traffic.

11) Majority of the marketers who find more time can improve sales.

12) 95 percent marketers indicated their social media efforts increased exposure for their business.

13) More than half of marketers who have invested atleast one year in social media marketing can gain new partnership.

14) By spending 6 hrs/ week 66 percent of the marketers see lead generation benefits with social media.

15) Nearly half of those who spend atleast 6 hrs / week on social media efforts saw a benefits of reduced marketing expense.

16) 58 percent respondents have a rise in search engine rankings.

17) 84 percent of the participant found that increased traffic occurred after spending 6 hrs / week on social media activities.

18) 69 percent respondent found that social platform provides market insight and developed loyal fans.

19) Face Book and LinkedIn are the two most important social network for market.

20) Most of the marketers plan on increasing their use of blogging (68) YouTube (67) Twitter (67) LinkedIn (64) and face Book (64)

21) 85 percent have no future plans to utilize snap chat and 68 have no plans to utilize geo location.

Suggestions

1) Marketer's can increase the potential of social media strategy by including audio and video content.

2) Marketer's should check the analytics periodically to understand the effectiveness of the media selected.

3) Marketer's can re-share successful posts frequently to create impression.

4) Sponsored posts can be included in the social networking sites.

5) New platform like Beme, Yubl, Blab, Miitomo can be experimented.

6) Marketers can run a face book live chat.

7) Creation of a separate social networking profile will help the marketer's to connect directly with the customer's.

8) Encouraging feedback, responding quickly and monitoring it will definitely enhance the company's image in the mind of customers.

9) Train staff to use social media and set out a clear social media marketing policy.

10) Marketer's should ensure branding is up to date while selecting a social media platform.

Conclusion

It is evident from the study that the social media marketing is gaining its importance now a days and it will definitely bring considerable changes in the return of the company.

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A STUDY ON THE SWOT ANALYSIS OF DIGITAL MARKETING IN INDIA

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Abstract

Today in India, a country of over 1.25 billion people, every working professional is obvious to be familiar with digital marketing, whether he he's a part of it or not. Simply speaking, digital marketing is the way to promote your products or services online. In India only 16% people was using internet till the end of 2013 and usage of internet is increasing by 15% and its reach to 31% in 2014 and increase rapidly day by day. India is one of the most populated countries in the world, with a population of 1.2 billion as of June 2015.

Introduction

The promotion of products or services via one or more forms of electronic media. For example, advertising mediums that might be used as part of the digital marketing strategy of a business could include promotional efforts made via the Internet, social media, mobile phones and electronic billboards, as well as via digital and television and radio channels. The term of digital marketing was first coined in 1990.This advent started with the development of internet, although its initial modes were not as we look today, such as Facebook, twitter, Google adverts, etc. Today, world tech and ecommerce giants like Amazon's net earnings are worth billions of US dollars in India.

Significance of the Study

Digital marketing is very cost efficient compared to traditional marketing channels like TV and print media. In fact, the cost of digital marketing campaigns will be a fraction of traditional marketing channels like print and TV. In digital marketing tracking the results is easy compared to traditional marketing channels. There are many analytics solutions which offer us a detailed report of the campaigns and these are real time reports tracked hourly and daily basis

Statement of the Problem

In India only 16% people was using internet till the end of 2013 and usage of internet is increasing by 15% and its reach to 31% in 2014 and increase rapidly day by day. More than 40% business depends on Digital marketing. With increasing of internet and Smartphone users soon in coming years around 90% business will be depend on online marketing in India. The present study makes an attempt to study the SWOT analysis of digital marketing in India.

Objectives of the study

- To study the importance of digital marketing in India.
- To assess the SWOT analysis of digital marketing.

Importance of digital Marketing

India is one of the most populated countries in the world, with a population of 1.2 billion as of June 2014. Penetration of Internet is around 20 % in India, which is less compared to US which has 80% internet penetration and China which has up to 50%. But 20% 0f 1.2 billion people makes it 25 corer internet users and is having global rank 3 in Worldwide Internet users ranking . I am giving these stats to give you a glimpse of how big our target audience is and these numbers are only increasing with time for good companies of digital marketing in India. My today's post is on why digital marketing is important in India.

SWOT Analysis of Digital Marketing in India

SWOT analysis of digital marketing is to say in brief, SWOT analysis is an in-depth analysis of any topic by bringing out the Strength, Weakness, Opportunity and Threat of it. This helps the user to understand all the aspects of the topic, both negative and positive. Through this blog we intend to only provide more clarity to the readers on how and why the world is moving towards digital marketing.

Strength of Digital Marketing in India

- Easy to target and reach more audience at a cheaper price.
- Campaigns can be easily customized and made more targeted as per our business requirements.
- As the world is more dependent on the internet, it helps the business to reach out and connect with the people on a larger scale
- Saves a lot of money as compared to the traditional way of marketing as it is cheaper and efficient.

Weakness of Digital Marketing in India

- A challenge to reach the population which is still not using the internet.
- High chances of failure of digital marketing campaigns because of confusion due to the availability of many different marketing options.
- Keeping pace with new trends and technology.
- Need of deep understanding of changing human behavior and requirements.

Opportunity of Digital Marketing in India

- More and More employment for the youth as this field is just growing and number of professionals are less.
- Increase the reach of your brand, therefore, leading to direct profit.
- There are lots of ways through which owners earn money apart from their primary business, e.g.- giving space for ads on website, affiliate marketing in e commerce etc.
- If the digital marketing comes everywhere in a full-fledged manner it will help the country itself to become digital that means major chunk of our population will start leading a life which will be smarter and faster.

Threat of Digital Marketing in India

- Storage of data with full security is still a big question mark.
- Analyzing the data in a wrong way can lead to damaging results which is found in a lot of companies. With the growth of this digital platform, customers have become more vocal about their feelings and opinions, and with the availability of this platform they have the power to damage as well as advocate for any brand, which is a high risk for the marketers.
- Day by day it is engulfing all the traditional ways of marketing, which ultimately might even lead to Television being left as the only source of traditional marketing.

Conclusion

This paper has clearly showed that SWOT analysis of digital marketing in India. The digital marketing when used marketing is the way to promote your product or services through the online. It includes, the digital marketing is the easy to reach the consumer for the product or services based information. The digital marketing needs all the business properly maintains the digital marketing channels. The digital marketing needs classifying such as cost, tracking, target audience, interactive and digital revaluation. Then this study mainly clarifies the SWOT analysis of digital marketing in India. The strength of digital marketing is the massage easy to target and reach more audience a cheaper price in the consumers.

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EFFECT OF DIGITIZATION ON BANKING INDUSTRY – CASE OF FEDERAL BANK

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Abstract

"Uber moment" is coming for banks as technology will enable banks to conduct business without a physical branch or office. While Indian banks haven't started trimming the bank branches, the growth in the number and the size of branches has definitely come down. The growth rate of branch network in India halved at the end of 2016 to 5% from 2010. The number of transactions on a digital network at the end of March 2016 was over 15.1 billion, up from 11.1 billion in the same period last year. That is essentially the number of cheques not issued. The return on having a physical network is diminishing. In this scenario the study tries to explore firstly on the determinants of demand for digital transactions in banking and secondly on the risk preference of customers on various modes of digital transactions. The study use primary and secondary data .The primary data is collected from 100 federal bank customers .The results point out that cost and time are major determinants of digital transaction and risk preferences varies with different modes of digital transactions. The study points out various strategies banks could adopt to improve digital banking experience.

Keywords

Digitization, Digital Banking, Demand, Risk preference, Federal Bank

Introduction

Banks have benefitted in several ways by adopting newer technologies. E-banking has resulted in reducing costs drastically and has helped generate revenue through various channels. Today's demand of banking is: anytime anywhere banking. This requires innovative, robust, secure, optimized and ready to meet the expectations of empowered and tech-savvy customers. As per last available information, the cost of a bank transaction on Branch Banking is estimated to be in a range of Rs.70 to Rs.75 while it is around Rs.15 to Rs.16 on ATM, Rs.2 or less on Online Banking and Rs.1 or less on Mobile Banking. The number of customer base has also increased because of the convenience in 'Anywhere Banking'. Digitization has reduced human error. It is possible to access and analyze the data anytime enabling a strong reporting system. It helps the banks or service providers to concentrate more on the customer without wasting time on data entry and other jobs which does not demand human element.

If banks can offer a better user experience, they will again come closer to what customers demand and need to satisfy

their aspirations and take advantage of the opportunity of this new age, since they are already living exposed to the digital transformation in nearly all aspects of their lives. Today, the topmost agenda for all the banks in India is digitization. An efficacious Digital Transformation begins with an understanding of digital customer behavior, preferences, choices, like, dislikes, stated as well as unstated needs, aspirations etc. And this transformation leads to the major changes in the organizations, from product-centric to customer-centric view.

Review of Literature

The emergence of the Internet had a significant impact on the diffusion of electronic banking, which is seen as one of the most successful business-to-consumer (B2C) applications in e-commerce. Electronic banking has changed the business of retail banks significantly in terms of cost reduction and increased convenience for the customer. The technological revolution has reshaped the sociotechnical interaction between banking service providers and consumers and has created more opportunities for service consumption, as customers have become less willing to visit traditional branches, more receptive to new electronic channels, and more sophisticated in demanding better service quality including 24-hour service availability.

Mobile banking (MB) is an innovative method for accessing banking services via a channel whereby the customer interacts with a bank via a mobile device (e.g., mobile phone or personal digital assistant). MB offers a great deal of promise in its ability to provide anywhere–anytime banking. Consumers' trust and risk perception may influence their acceptance of MB services. (Xin Luo, 2010). Age, gender, education, and income level have been studied. For example, Mattila (Karjaluoto H., 2002) surveyed over 1300 Finnish bank customers and found that MB adopters and non-adopters show different sociodemographic characteristics. Adopters are relatively young, with the majority in the age group of 25–34. They are mostly white collar workers and students with average income levels. Likewise, Laforet and Li (Laforet, 2005) found that mobile bank adopters in China are relatively young, wealthy, and employed.

Determinant factors suggested by the diffusion of innovation model, the Theory of Planned Behavior (TPB), the Technology Acceptance Model (TAM), and other related constructs have been studied to explain the adoption of digital banking. Latest mode of digital banking - mobile banking adoption constructs have been studied to explain MB adoption behaviors, the major trigger of adoption behavior is availability of mobile services regardless of time and locations (one of the relative advantages of m-commerce); the major hindrances to adoption are the malfunction of services and lack of guidance. Tan and Teo (Tan, 2000) had combined the diffusion of innovation theory and TPB to explain intention to adopt Internet banking. Their study revealed that relative advantage, compatibility, trialability, perceived risk, perceived self-efficacy, and government support of Internet commerce are significant determinants Both Lee et al (M-C, 2008). and Mattila (Mattila M, 2003) discussed the importance of perceived risk on adoption behavior.

In his research, Norazah (Norazah, 2006) stated that in terms of acceptance and use of new innovations, products and services; adoption and diffusion are the two most effectively related procedures. Furthermore, the diffusion process cannot be separated from adoption process, and on the other hand, individual adoption decisions compose the diffusion process (D.W Straub, 2002) . As a result, in diffusion and adoption studies; customers' perception, behavior prediction, user acceptance and innovation adoption is frequently appeared as the core theoretical constructs. Rogers (Rogers, 2003) argued that adoption process is passing from awareness to acceptance of a product innovation. Hence, Rogers (Rogers, 2003) believed that five characteristics of an innovation (relative advantage, complexity, compatibility, trialability, and observability) are the most important determinants of adoption rate of an innovation.

Trialability, observability, relative advantage, perceived risk, complexity, and compatibility have statistically significant relationship with mobile banking adoption. Out of them, trialability has the most impact on the dependent variable. As new technology reveals new innovation, people want to see and test the new model before adopting it.

The second most important factor facilitating users' intention to adopt mobile banking is found in this study is observability. Visibility is people want to see their transactions go through and get notified effectively.

Many studies have been conducted which explores and integrates the various advantages of online banking to form a positive factor named perceived benefit. In addition, drawing from perceived risk theory, five specific risk facets – financial, security/privacy, performance, social and time risk – are synthesized with perceived benefit as well as integrated with the technology acceptance model (TAM) and Theory of planned behavior (TPB) model to propose a theoretical model to explain customers' intention to use online banking**.** Featherman and Pavlou (Feather MS, 2003) also defined perceived risk as the possible loss when pursuing a desired result. The various facets of perceived risk are Security/privacy risk: This is defined as a potential loss due to fraud or a hacker compromising the security of an online bank user, Financial risk: It is defined as the potential for monetary loss due to transaction error or bank account misuse, Social risk: This refers to the possibility that using online banking may result in disapproval of one's friends/family/work group, Time/convenience risk: It may refer to the loss of the time and inconvenience incurred due to the delays of receiving the payment or the difficulty of navigation (finding appropriate services and hyperlinks),Performance risk: This refers to losses incurred by deficiencies or malfunctions of online banking websites.

TAM (Technology Acceptance Model) is an adaptation of the **theory of reasoned action** (**TRA**) by (Fishbein M, 1975) and was mainly designed for modeling user acceptance of information technology (Davis, 1989) which is based on **Perceived usefulness and Perceived Ease of Use.** According to TPB(**Theory of planned behavior)**, a person's actual behavior in

performing certain actions is directly influenced by his or her behavioral intention and, in turn, is jointly determined by his or her attitude, subjective norms and perceived behavioral controls toward performing the behavior. Perceived benefit is also a driving factor which can be categorized as **direct** benefits that customers can enjoy from a wider range of financial benefits, faster transaction speed, and increased information transparency and the **indirect advantages** which includes online banking allows customer to perform banking transactions anywhere in the world and enjoy 24-hour service.

From the different studies conducted by different scholars in different parts of the world points to controlling the risk of online banking is more important than providing benefits and online banking companies could develop trust-building mechanisms to attract customers, such as statements of guarantee, increased familiarity through advertising, and long-term customer service. Mobile phones are the future of financial transaction. It should reach average person (V, 2012). Favorable attitude was found in rural people. These factorial relationships hold crucial information for technology.

The challenges for digital banking in India are, **Security Risks -** External threats such as hacking, sniffing and spoofing expose banks to security risks. Banks are also exposed to internal risks especially frauds by employees / employees in collusion with customers, **Financial Literacy / Customer Awareness -** Lack of knowledge amongst people to use e-banking facilities is the major constraint in India, **Fear factor -** One of the biggest hurdle in online banking is preference to conventional banking method by older generation and mostly people from the rural areas. The fear of losing money in the online transaction is a barrier to usage of e-banking, **Training -** Lack of adequate knowledge and skills is a major deterrent for employees to deal with the innovative and changing technologies in banks. Training at all levels on the changing trends in IT is the requirement of the day for the banks.

This paper basically focusses on the determinants of demand for digital banking which includes mobile banking as well and the risk perceptions of customers. It is limited to the Federal Bank customers and can be extended to a larger population which covers the various income levels of the society.

Growth in the volume of digital transaction in India

Volume (Million)					
Year	RTGS	Retail Electronic Clearing (ECS,NEFT,IMPS)	Cards (debit, Credit)	Prepaid Payment Instruments (m-Wallets, PPI cards, Paper Vouchers)	Mobile Banking
2015-16	98.4	3,141.5	10,038.7	748.0	389.5
2014-15	92.8	1,687.4	8,424.0	314.5	171.9
2013-14	81.1	1,108.3	7,219.1	133.6	94.7
2012-13	68.5	694.1	6,174.5	66.9	53.3
2011-12	55.1	512.4	5,731.6	30.6	25.6

Source: RBI data and Dun & Bradstreet Research

Methodology

The study use primary and secondary data .The primary data is collected from 74 federal bank customers. A total of 124 responses were collected out of which only 74 completed responses were taken for the study. The respondents are the present employees of Presidency University, Bangalore who hold salary account in Federal Bank.

An online survey was sent to the sample frame and completed responses of 74 were collected. The analysis was carried out on the 74 random samples collected.

Percentage analysis was used and bar charts were used for presenting the analysis. The determinants of demand for digital transactions and the risk preference of customers were analyzed.

Secondary data was basically to find out how the number of digital transactions is increasing and how fast the customers are realizing the advantages of online banking and the prospects of a changing banking industry.

Result & Discussion

The parameters considered for the determinants of demand for digital transactions were

- Customer Acceptance of digital banking was taken into consideration by asking how many of them are doing online transactions. The demand for the number of digital transactions in a month was also taken into consideration which is also a motivating factor to do digital banking. The customer trust keeps on increasing as they perform more and more transactions for a long period of time which will increase the demand for online transaction.

The customer acceptance for digital banking is about 98% and the demand for digital transactions is also high and on an average customers perform 2- 5 digital transactions in a month.

This shows increased customer awareness about digital banking, better infrastructure, better accessibility and connectivity which points to better digital banking experience.

- Type of digital transactions in demand

Among the digital services provided NEFT is the most popular with 88% opting for it followed by Credit/Debit Card Payments. Mobile banking and IMPS Mobile banking and IMPS are also gaining importance at a faster pace. This analysis serves as an input for banks so that they can provide better experience to their customer for services in demand and potential services.

Federal Bank – A case study

The determinants of Demand was done specifically for Federal Bank on the following aspects.

- The demand for digital banking was measured
- Number of customers who were doing digital banking for the first time with Federal bank account
- The type of services in demand
- A comparison of digital banking experience with Federal bank and the primary bank of customers

95% of the Federal bank customers do digital transactions, with almost 38% claiming that they are doing digital banking for the first time. The majority of the customers demand NEFT followed by Debit/Credit payments and mobile banking. Customers have rated Federal bank digital experience as good for ease of doing, saving time, security and reliability. When comparing with their primary banks again Federal bank has been rated good on online banking services offered, ease of doing, security and reliability. Federal bank was rated the lowest for transaction cost and online help.

To find out the risk preference of customers on various modes of digital transactions the following parameters were considered

- Risk tolerance
- Purpose of visit to the bank
- Customer preference for digital banking
- Risk factors perceived by customers
- Frequency of incidents of risk
- The risks that customers faced while doing digital transactions.

The findings were quite interesting which actually encourages digitization drive by GOI (Government of India), inputs for policy formulation by GOI and how banks can minimize risk in digital banking transactions.

73 % of the customers do not visit their banks every month which shows that they are ready to take the risk inherent in the digital transactions that they perform. The number of customers who visit the physical bank is minimal which is a positive sign for the digitization drive. 50% of the respondents visit their banks only for customized solutions which shows that people prefer to do their transactions without visiting physical branches. Around 50% visit for routine services like fund transfer, cash deposit/withdrawal etc. 85% prefer to do transactions at the comfort of their home unless there is a specific reason. Problems in Internet connectivity, lack of security, transfer of funds to wrong account and delayed confirmation of transactions from vendor are the major risk factors identified by customers for digital transactions. Almost 50% responded that they did not encounter any risk while performing digital transaction which is good sign.

Another 50% faced risky situations and majority of them voted for delayed confirmation as the major risk faced by them while doing transactions which can be due to various reasons?. The next problem was disruption in internet connectivity while doing the transaction followed by non-reversal of wrong transactions. The risk factors prevent the customers from accepting a revolution in doing banking transactions that is digital and hence the diffusion of the technological advancement will be in question if steps are not taken to minimize the risk factors.

Suggestions

Resolving issues in Internet connectivity would be a game changer for the increased acceptance of digital banking transactions. People are also worried about the privacy, security and reliability of information and identity theft. Banks can invest in building customer awareness by providing training for people in rural areas to perform safe and

secure online transactions and make them aware of the advantages of digital banking. This financial inclusion drive will definitely save on time, money and effort. Banks can reduce the number of branches and people thereby reducing their operating costs. The customer has to be given proper support at the time of doing the transaction through online support system and call centers. The digital banking services should be accessible 24/7 and should be made available to all parts of the country through technological improvement. The major issue customers have pointed out is the delayed confirmation of transaction from the vendor which needs to be addressed because many a time it can prove to be a negative force in increasing digital customer base.

Conclusion

From the study it is clear that people tend to prefer digital banking as it saves time and costs for them if they feel that the transactions are secure and their personal information is protected. Delayed confirmation of transaction from the vendor proved to be the biggest problem faced by customers followed by issues in internet connectivity and lack of security turned out be the greatest hindrance in doing digital banking transactions. The number of digital transactions are increasing which can be further increased by building customer awareness, high security for information and solving issues in internet connectivity.

Majority of the customers prefer to do online banking transaction provided they have seamless internet connectivity and high level of security for their information. Perceived ease of use and perceived usefulness as researched by (Davis, 1989) are found to be the driving factors in technology adoption and diffusion process. This is definitely an unexplored area and if banks concentrate on providing these, they can reduce their number of branches and physical banking which leads to reduction in operating costs and better banking experience for customers. The quality of services provided by these virtual banks should be 10 times better than the current scenario. The future of branches in banking is focusing on consultation and advisory rather than transactions**.** The bank employees can concentrate more on understanding their customers and provide consultation services for their clients.

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DIGITAL INDIA AND RIGHT TO PRIVACY – ISSUES AND CHALLENGES

"Privacy being fundamental to the core of a digitised society, we need to re-look at this aspect as a whole rather than in conjunction with other aspects of information technology"

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Introduction

The government of India named digital India campaign is to improve online framework by improving the internet connectivity, this program is to provide easy online government services to the citizens of India and also to improve the technological aspect of India by empowering internet net web in the country. The digital India campaign was launched on 1st of July'2015 in presence of various top industrialists.

To digitally grow the country and improve the IT institution of the country, digital India is one of the biggest steps ever taken. Worth more than rupee one lakh crore is invested to unveil this program by launching various schemes of the digital India campaign such as digital locker, national scholarship portal, e-health, e-education e-sign, etc.

Objective of Digital India Initiative

Digital India is a campaign launched to empower the country digitally. The motive of this campaign is to strengthen the electronic services of government services; it is done by reducing the paperwork. It is a very fruitful technique as it takes off the weight of investing time over paperwork and devotes man labour in the various field, it is highly efficient and effective.

Started on 1st July 2015, it is to link the rural people with the high-speed internet network to gain any information needed. Improving **Digital Infrastructure**, **Digitally Delivering Services** and **Digital Literacy** are the three major aspects of digital India campaign.

By digital infrastructure here we mean, creating a space where all the registered citizens will have a digital identity, which will help in getting easy and fast government services. All the government services like managing a bank account, financial management, safe and secure cyberspace, education, distance learning etc.

Digitally delivering services will facilitate all the people connected to this system and will get benefits of government plans and policies as soon as they are launched and as when it is needed. It will also promote online business as it makes the financial transaction easy by electrification and classless transaction.

Role of Government and NGO'S

Mr. Narendra Modi, the active prime minister of India of Bharatiya Janta Party played a very crucial role in boosting this project by approving Rs 1 lakh crore to furnish this campaign. This project was

dearly desired for a long time that has happened as hoped now by Narendra Modi, and it is expected by to end by 2019 if it goes as per plan. To facilitate e-governance, Mr. Modi has aimed to provide better e-services, to obtain a reduction in paperwork, improve work efficiency and save time.

The major idea is to connect the rural area with urban technology, also to provide e-services to remote villages that happen to suffer a lot to do pity works which involve a lot of official work, now all this will be done at the very efficient time and at low labour just at their phone's length. This work is monitored by Mr. Modi himself. An appreciable effort to make this campaign is made by the chairman of Reliance group, Mr. Ambani who make a move by investing 2.5 lakhs crore in the Digital India project

The layout of the campaign was through a much-panned system of working where more than 250,000 villages and other residential areas of the country were provided with high-speed internet connections. And in this, the BHARAT BROADBAND NETWORK LIMITED "BSNL" played a very vital role. As BSNL take the initiative to provide high-speed internet to all corners of the world

Initiatives towards Digital India

BHARAT stands for "Better Healthcare, Agriculture, Renewables and Technology" is major initiative taken by India in collaboration with the US to help disruptive Startups in India. The aim is to provide corporate contribution to growing industries along with the $150 mil monetary support in order to make them realize their full potential & help India make it's economy self-sufficient.

The **Unique Identification Project** was conceived as an initiative that would provide identification for each resident across the country and would be used primarily as the basis for efficient delivery of welfare services. It would also act as a tool for effective monitoring of various programs and schemes of the government.

National Knowledge Network (NKN) project is aimed at establishing a strong and robust Indian network which will be capable of providing secure and reliable connectivity. Globally, frontier research and innovation are shifting towards multidisciplinary and collaborative paradigm and require substantial communication and computational power. In India, NKN with its multi-gigabit capability aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift.

Right to Privacy in India

Privacy means, *"The condition or state of being free from public attention to intrusion into or interference with one's acts or decisions."*

The core progressive vision of Digital India is central to ensure that all citizens and users reap the benefits of technology and the Internet. It is a very bold step forward to connect the unconnected residing in the remotest parts of the country as well as driving the agenda of financial inclusion via digital transactions. Data privacy will play a very crucial part in building trust amongst users, while ensuring a digitised economy.

The current focus on the right to privacy is based on some new realities of the digital age. Personal spaces and safeties that were previously granted simply by physical separation are no longer protected. The digital network enters the most proximate spaces and challenges the normally accepted notions of the private. It brings into focus new means of exercising social, economic, and political power, and reducing of autonomies.

Like in the physical space, the private and the public must be separated in the digital realm as well. We need a constitutional definition and guarantee of the right to individuality, personal autonomy and privacy in the digital age. It must be provided in the clearest terms by the Supreme Court, which is currently considering this issue.

Right to Privacy as a Positive Right

Some arguments advanced by those seeking the right to privacy, however, are troubling. It seems that for many, the right is basically against the state, and not so much the digital corporations. One hears propositions such as: unlike corporations the state is a monopoly, corporations rely on private contracts for data access, providing data to them is voluntary, and so on.

A right is a substantive right only if it works in all situations, and for everyone. A right to free expression for an individual about her exploitation, for instance, is meaningless without actual availability of security that guarantees that private force cannot be used to thwart this right.

The role of the state therefore is not just to abstain from preventing rightful free expression but also to actively ensure that private parties are not able to block it.In the same manner, the role of the state in terms of the right to privacy in the digital age is not just to abstain from its violation. It is equally to ensure that private parties are not able to violate such a right. The court must specifically direct the state to ensure this imperative.

A recent report by Vidhi Centre for Legal Policy analysed the current rules and norms in place for data protection. The results of the report said that Indian data protection laws are inadequate and only address some of the security, privacy and other issues addressed by similar laws in other countries. From biometrics-based Aadhaar data to EMR (Electronic Medical Record)-based medical data, this includes sensitive information which can not only be sold to third party vendors for advertising but can have disastrous consequences if someone breaches the data and invades the privacy of users. Privacy being fundamental to the core of a digitised society, we need to re-look at this aspect as a whole rather than in conjunction with other aspects of information technology.

Digital Rights

Digital rights are basically human rights in the internet era. The rights to online privacy and freedom of expression, for example, are really extensions of the equal and inalienable rights laid out in the United Nation's Universal Declaration of Human Rights. According to the UN, disconnecting people from the internet violates these rights and goes against international law. British Prime Minister David Cameron recently

pledged to give all UK homes and businesses access to fast broadband by 2020, adding that access to the internet "shouldn't be a luxury, it should be a right"

Does the right to privacy becoming a fundamental right mean the Aadhaar programme is unconstitutional or will be shut down?

The Supreme Court on August 24 2017 ruled that all Indians enjoy a fundamental right to privacy, a right that is protected under Article 21 of the constitution.

In October 2015, a Supreme Court constitution bench led by the then Chief Justice H.L. Dattu declared that the "Aadhaar card was purely voluntary" and could not be made mandatory. The bench further stated that the voluntary nature of Aadhaar would continue to be in place until a larger Supreme Court bench of judges decided whether the biometric authentication scheme violated the privacy of Indians.

The need for a separate Data Privacy Legislation

The laws on privacy, the Supreme Court concluded in the year 1963 that Article 21 of the Constitution includes "right to privacy" as a part of the right to "protection of life and personal liberty". The context in the said judgment was more of physical privacy. Then, Section 72 of the IT Act deals with protection of data and thereby privacy of data. After an amendment in 2008, personal data was also brought under this section. The IT Act outlines sensitive personal data and transfer of such data under a contract with other entities and imposes due diligence on corporate to provide for data security. However, on the ground, the Act needs to be implemented and a practical approach to redressal of privacy concerns should be formulated.

The laws should be drafted to protect all forms of personal data, such as passwords, financial information, health conditions, medical history, and biometric information along with a requirement to seek consent of individuals before collecting any personal information. If an app needs the personal information of the user, then that data needs to be destroyed soon after its use. This is the age of mobility and there is a substantial change in the way people access the internet. Hence, there is an intrinsic expectation that data be protected

Conclusion

Digital India is not at all about a bunch of Indian people being on Facebook, Twitter & LinkedIn changing their DP's showing support. It's about understanding the essence of this proposed change & the core idea behind Digital India is that Indian markets don't crash when FII's pull out their money, so that small business owners don't loan out all their assets to get a kick-start. It's about spreading awareness & information making the people of India assertive so that "we as a nation" can restore its status as the "Golden Bird" it was once considered.

Digital India dream and protect users from any kind of cyber harm. It is crucial to have in place an effective regime for the protection of personal information—only then can we win the trust of the users in our country and can witness more people becoming a part of the digital journey

Prime Minister Narendra Modi on Digital India,

"*We are a nation of 800 million youth below the age of 35 years. They are eager for change; have the energy and drive to pursue it; and, the confidence to achieve it. When each of the 500 odd towns produces 10 startups, and each of our six hundred thousand villages produce 6 small businesses, on a regular basis, we will create an enormous economic momentum and generate a huge number of jobs in our country."*

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DIGITAL ECONOMY: CHALLENGES AND OPPORTUNITIES

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Abstract

Digital economy refers to an economy that is based on digital computing technologies. It is the new productivity platform that some experts considered as the third industrial revolution. Digital economy provides India a way to start off the journey toward becoming a developed nation. The digitalization makes drastic changes in information technology and business processes. It influences all the sectors of the economy including retail, agriculture, banking, health, tourism, education, commerce and industries. Digital economy brings with a number of opportunities as our Telecom Minister Ravi Shankar Prasad said that Government's Digital India project will create over 50 million jobs once it is complete. But it has to face new challenges and rules of the game in the global market. The purpose of this study is to find out the opportunities and challenges in digital economy.

Keywords

Digital economy, impact, opportunities, challenges.

Introduction

The industrial economy is evolving and ushering into digital economy in which information, services, products and money are transferred and transacted electronically. In the present era, no country can survive and thrive unless it imbibes the e-ways. India's new leadership considers the digital economy as a major growth enabler and our Prime Minister Narendra Modi was launched digital India programme on 2 July 2015 . The aim of this program is to ensure that government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity or by making the country digitally empowered in the field of technology.

Digital India stands for transforming India into a digitally empowered knowledge economy. It is an initiative of government of India to integrate the Government Departments and the people and ensuring that the Government services are made available to citizens electronically by reducing paper work. The vision of the digital India programme presented by the central government has resulted in inclusive growth in areas of electronic services, products, manufacturing, and job opportunities. Key areas that have

been positively impacted ensuring growth of the digital economy include:

- Digital Infrastructure as a utility to every citizen
- Governance and services on demand
- Digital empowerment of citizens.

Digital infrastructure as a utility to every citizen

1) Provide High speed internet facility.
2) One person one identity approach.
3) Increasing participation of citizens in digital and financial economy through mobile technologies and bank accounts.
4) Providing easy access to citizens to common service centre.
5) Sharable private space on public clouds.
6) Cyber safety and security.

Governance & services on demand

1) Integrating various government departments to provide seamless services to citizens.
2) Real-time services to citizens through online and mobile applications.
3) Availability and portability of all citizen entitlements on e-clouds.
4) Transforming services digitally to increase the ease of operating businesses.
5) Promoting e-payments and cashless economy.
6) Leveraging Geospatial Information Systems (GIS) for decision support systems & development.

Digital empowerment of citizens

1) Increasing digital literacy to enhance digitalization.
2) Accessibility to digital resources and infrastructure.
3) Designing digital resources/services compatible with Indian languages.
4) Increasing participation in government by collaborating digital platforms to include citizenry.
5) No requirement for physical submission of documents or certificates. Encouraging virtual submissions.

Review of Literature

Various articles and research papers provide a detailed insight about digital economy and its impacts in India. Rani Suman (2016) conducted a study on Digital India: Unleashing Prosperity and concluded that digital India project provides a huge opportunity to use the latest technology to redefine India the paradigms of service industry. It also pointed out that many projects require some reengineering, refinements and transformation to achieve the desired objectives. Himakshi Goswami (2016) studied on Opportunities and Challenges of digital India Programme and concluded that the elements of the Digital India programme accommodate all of the recommendation of the OECD. It also explained that for successful implementation of digital India programme involves lot of hindrances but in the present global context there is no second thought .Karamvir Sheokand and Neha Gupta (2017) conducted a study on Digital India programme and

impact of digitalization in Indian economy. They found that a digitally knowledgeable and empowered population can transform the whole economy. They concluded that digitalization will help in betterment of all the processes like purchasing, selling, inventory control, employment, product innovation and development etc.

Research Methodology

The study is based on the secondary data obtained from internet through journals, research papers and expert opinions on subject matter.

Objectives of the Study

1) To know the concept of digital economy.
2) To analyse the impact of digitalization in various sectors.
3) To identify the opportunities and challenges in the digital economy.

Concept of Digital Economy

Digital economy refers to an economy that is based on digital computing technologies. The digital economy is also sometimes called the Internet Economy, the New Economy, or Web Economy. Increasingly, the "digital economy" is intertwined with the traditional economy making a clear delineation harder.

According to Thomas Mesenbourg (2001), three main components of the 'Digital Economy' concept can be identified:

- e-business infrastructure (hardware, software, telecoms, networks, human capital, etc.),
- e-business (how business is conducted, any process that an organization conducts over computer-mediated networks),
- e-commerce (transfer of goods, for example when a book is sold online).

The digital economy is the new productivity platform that some experts regard as the fourth industrial revolution. Digital revolution is expected to generate new market growth opportunities, jobs and become the biggest business opportunity of mankind in the next 30 to 40 years. Goldman Sachs predicts that India - comprising 15% of the world population, with a growth rate of 7 to 8%, could be the second largest economy by 2030.

The information and communication technology is advanced through digital economy which has made technology cheaper and faster, changing business processes and boosting innovation. It has impact on all the sectors of the economy including retail, media, manufacturing, agriculture, banking, health, tourism, education, commerce and industries. Thanks to digitalization, because it improve flexibility and efficiency and extend their reach into global market.

The digital economy is an umbrella term used to describe markets that focus on digital technologies. Transition to digital technology is in progress. From the media to cars, tourism, banking, agriculture and healthcare, the whole of the economy is now digital. New business models, supported by powerful network effects and large-scale use of data, upset the balance of regulations and

of our social model. The digital economy tends towards market concentration, although innovation may call dominant positions into question at any time. The digital economy is also giving rise to legitimate concerns regarding the future of employment: apart from its impact on certain professions, it is causing structural changes in the distribution of employment and bringing the long-term rise in the salaried workforce to an end. This poses new challenges in terms of labour law and social security.

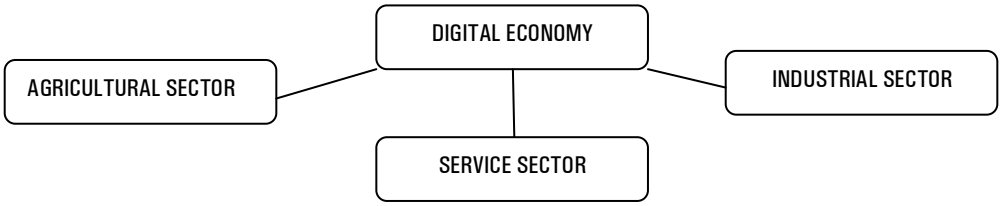
It is widely accepted that the growth of the digital economy has widespread impact on the whole economy. India has the opportunity to develop its own unique digital economy that provides the efficiencies and the benefits of digitalization without destroying the traditional economy. It will require a lot of Indian entrepreneurs to do it. If successful, Digital India will become the model for all developing countries. In the words of Aruna Sundararajan, the speed at which India is embracing digital technologies will lead to digital transformation and digitally empowered society. There is no country in the world today, which has much stake in digital technologies as India has. The reason for this is that we have the youngest demographics in the world and this young population prefers to transact and communicate digitally. India will be the largest consumer of digital technologies in times to come.

Nine Pillars of Digital India Programme

Under digital India Programme nine key initiatives are in progress and they are; Broad band highways, Universal access to mobile connectivity, Public internet access programme ,E-Governance, E-Kranti ,Electronic manufacturing, IT for jobs ,and Early harvesting programme.

Impact Of Digitalization In Various Sectors

On the basis of occupational structure Indian economy is mainly divided into three sectors, namely, (1) agricultural sector; (2) Industrial sector; and (3) Service sector. The Digital India Programme aims at overall and all-inclusive growth of the Indian Economy in agriculture, industry (manufacturing) or services. This will help in creating employment opportunities in the country so that the GDP and per capita income increases, and the life style of people can be improved.



Agriculture

Indian economy is mainly depending on agricultural sector. Digitalization made improvements in agricultural sector. Through digitalization farmers get timely and correct information about soil, fertility of seeds, weather conditions, expert opinions, prices, inputs as well as outputs in different

markets, and cutting of costs due to better utilization of resources etc. This will lead to increased profits and better utilization of human resource in this sector.

Digitalization will lead to better infrastructural facilities like warehouses, green houses, ease in transportation and storage of produce that will increase the life of the produce. Indian agriculture depends a lot on monsoon. Digitalization of the sector will provide farmers with better irrigation facilities and less dependence on monsoon. Better agricultural facilities will lead to increase agricultural produce there by increasing the returns of the sector.

With the help of automation, farmers have increased access to the information they require or any knowledge they want to acquire regarding farming. This increases the level of agricultural literacy in the country thereby improving the future prospects for agriculture.

To increase the contribution of agriculture sector in the economy and to motivate farmers to move towards better farming skills, Indian government is taking various initiatives like, kissan credit cards, soil health cards scheme, e-NAM (National Agriculture Market), My Village My Pride scheme, etc.

Impact of digitalization on industrial sector

By digitalization in the industrial sector the GDP is increased and it leads to the growth of economy as a whole. Digitalization provides ease in purchase and inventory control. One can procure the desired quantity and quality of materials at competitive prices. It offers wider access to customers through various online sources. New innovations came in to market and new products can easily introduced in the market. Supplier-producer, producer-customer, labour management, intermediary relations as well as all other trade relations become cohesive due to increased transparency in trade. Moreover, new jobs will be created as the sector will move towards growth and expansion.

Impact of digitalization on service sector

The services sector of the Indian economy which contributes to 60 per cent of the Gross Domestic Product. Digitalizations make drastic changes in Banking and Finance, Insurance, Retail, Education E-Commerce, Tourism and Health care.

Banking and finance –Digitalization brings improvement in banking activities and managing bank accounts .The digitalized facilities provided by banks include mobile banking, NEFT, online banking, etc. which improved the future growth prospects for the banking sector. Getting loans and financial assistance has also become easy and cost effective due to digitization of the sector. To encourage digital transactions government withdraw the cheque book facility and promote debit and credit cards.

Digital banking helps in depositing money, money transfers, and bill payments and so on. They can also provide additional financial services, such as wealth management, currency exchange and safe deposit boxes.

Insurance –The insurance industry is getting intensely impacted by the penetration of digital. Insurers are selling policies online and that, too, quite successfully. The Insurance Regulatory and Development Authority

(IRDA) had proposed digitization of insurance policies in2013, have now made it mandatory. With digitization, each policyholder will get a policy document known as the e-insurance policy, which will be the evidence of an insurance contract. People are becoming more and more aware of the advantages and benefits insurance provides and hence the sector is growing continuously. Also, digitalization of services like premium payment, policy comparisons, availability of important information, etc., has made the process much simpler. Besides basic services, advanced services can also be offered through the repository on a yearly or per-service basis and these may include generating premium-due calendars, premium and claims history, service request tracking, facilitating online premium payment and so on.

Retail – Retail is growing after digitalization of services like online bill payments by card swiping, online shopping sites and web pages, online marketing, cost discounts on some particular cards etc.

Education – Digital education resources consist of multimedia materials existing on a web page in a computer network. Typical digital education resources include emails, digital audio, multimedia software, and online learning management system.

Application of digital methods in education enhances the learning processes for students, teaching experience and ease for teachers and the overall learning procedures. Ease in availability of information and knowledge leads to a better educated society and enhances the standard of living in general.

E-commerce – E-commerce is the use of internet to conduct business. Through e-commerce individuals get more choices and it adds depth to the economy. Through digitalization products can be advertised, sold and paid electronically. E-commerce provides secure shopping transactions through internet and instant verification of credit cards. Digital enhancement is the utmost requirement for e-commerce to grow.

Tourism – Tourism is growing by various measures taken by government to make the stay pleasant for the tourists. Also, digitalization of economy is resulting in increase in the tourists in the country because of the ease it brings.

Healthcare – Healthcare industry benefits by digitalization in the form of bill payments, keeping records of patients, tracking files, discussing cases with other doctors, getting treatments from far away situated doctors, availability and procurement of medicines online, free consultation services, etc.

The service sector contributes the most in the overall GDP of the country, though the manpower employed in the sector is quite less compared to other sectors. If more efforts are put in the growth of the sector, the resulting development of the economy will also be huge, registering the country from the developing economies to developed economies.

Opportunities and Challenges of Digital India Programme

Electronics and IT Minister Ravi Shankar Prasad said that India's burgeoning

digital economy is expected to provide job opportunities to about 50-70 lakh youth in the country by 2020.Reiterating the Centre's commitment towards the country's growth, Prasad said it is important to have affordable and inclusive technology to ensure growth and prosperity for the masses. But the digitalization move is not free from the challenges.

Opportunities of Digital India Programme

1) Digitalization will generate 17 million jobs directly and 85 million jobs indirectly. Almost 100 million jobs will be created by the plan in next 5 years
2) Digitalization brings transparency in Governments operations.
3) Internet played a pivotal role in brings corruption down.
4) Digital India helps young entrepreneurs to start their own enterprise at minimal cost.
5) Each citizen would be empowered to access information.
6) Two way communications will be established between citizens and Government.
7) Digital India campaign will help in reducing the negative impact on ecology or global warming.
8) Digital India will make e-education, e-health, e-governance possible.
9) In India there is much scope in digital marketing.
10) Digital lockers will help citizens to store their important documents and certificates digitally.
11) The service industries like banking, insurance, hospitality, aviation, railways are using it as boosters to promote business.
12) In addition the Digital India Campaign intends to render Universal Access to mobile, e-governance, and ample IT jobs for fresh college graduates.

Challenges of Digital India:

It is obvious that the digital India programme will face many challenges. Some of the challenges which may create problem in its implementation are as follows:

1) Digital India program aims to integrate the whole country digitally. But it is not possible due to diversification in terms of culture, language, customs, food habits, laws and traditions.
2) The internet protocols in different states are different depending on the kind of hardware and software they implement. So there is need for some sort of directive to standardize all the software protocols.
3) Digital India aims to transform the country into a digitally empowered knowledge economy. It needs coordination and cooperation of all the government Departments. Without team work digital India program cannot be successful.
4) High level of digital illiteracy is one of the biggest challenges in the success of digital India programme. According to ASSOCHAM-Deloitte report on Digital India, November, 2016, around 950million Indians are still not on internet.

5) We live in a world where internet and cyber-crime are inseparable enemies. The entire architecture should be designed in such a way that there is proper authentication done of all the documents put online by citizens and it is available to the right users at any time they want with the right authentication. In order to ensure the cyber security the country should have privacy norms.

6) National Optical fiber network ensures broadband reaches in every nook and corner of the country. But to reach broadband connection country wide is not an easy task.

7) The electronic devices and internet services are still by and large very costly for an average Indian citizen.

8) The complete digitalization is possible only after giving training to people. It's a tedious task to train so many people of different calibers and interest into one common discipline. Most of the population lack the basic technical qualification required for the job.

9) India's digital infrastructure is comprehensively inadequate to tackle growing increase in digital transactions. The biggest challenge faced by Digital India programme is slow and delayed infrastructure development.

Suggestions

10) Digital India Programme can be successfully implemented only by the commitment and participation of various departments. Some policy changes are needed to make digital India a reality. Government should encourage private sector to contribute to digital infrastructure. To promote digital India programme, create awareness to people and also provide digital literacy among citizens. Proper training should be given to individuals to use internet and smart phones. Moreover, the country should ensure digital security to all the citizens.

Conclusion

The growth of the digital economy has widespread impact on the whole economy .The digitalization will lead to better performance and growth of all the sectors which in turn influence the growth rate of the economy. In the agricultural sector, industrial sector and in service sector digitalization will help in betterment of all the processes. Digitalization promotes business, banking, increased output, better employment, enhanced productivity and literacy. Digitally empowered economy develops much faster, effectively and efficiently by utilizing its capital and human resources.

According to the Financial Express, India is expected to become one of the largest digitized countries across the globe. CISCO estimates that by 2019, India will have 545 million internet users, 654.1 million smart phone users and 1.6 billion network devices. The Government of India has realized the immense potential for digital innovation in India and has laid the platform for it by the digital India initiative which includes large scale digital infrastructure, Government services which will be digitally enabled and greater empowerment to citizens through digital options.

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IN SEARCH OF NEW SOCIAL MEDIA FOR THE NEW DIGITAL AGE

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Abstract

While social media has transformed the digital space in many positive ways, it has also brought its share of evils. For one, there are terrorist organizations that use social media as a prime means of recruitment and radicalization. That apart, at a more mundane level, the social media infrastructure that exists today has, in many ways, made meaningful dialogue more difficult than before. This has led many including Tim Berners Lee, the inventor of the World Wide Web, to call for a reinvention of social media. In this context, this article explores the current social media infrastructure, primarily from an information perspective, with a view to understand the underlying phenomena that govern the production, distribution, amplification and dying out of information in social media. An exploration is then made, of the challenges that need to be surmounted and the opportunities that can be tapped, in coming up with a new social media infrastructure, which is better suited to a more inclusive, compassionate and democratic global and local public sphere. It is posited that the adoption of such a new infrastructure is most fundamentally a question of a "values lag" – a case of our value system lagging behind the fast advance of the new technologies. We find that a new set of values is needed – comprising some age-old values to which we need to return to and some new-age values which we need to embrace afresh. The prospective distinctive features of a new social media ecosystem are delineated; these include a more evolved regulative and legislative framework for social media companies, an in-built bias towards slowness as opposed to instant communication, and a reduced reliance on numbers, among others. Such an ecosystem would be integral to the rescue and restoration of a richer and more fruitful digital space, a sine qua non for the peaceful coexistence and progress of humanity in the times ahead.

Keywords

Social Media Ecosystem, Social Networks, Public Sphere, Digital Age

Social Media: Advent and Evolution

The advent of digital infrastructure and the explosion of digital technologies have revolutionized our individual and collective lives in ways that were hitherto unimagined. Social media has been an important transformative force in the new digital ecosystem that has emerged, and is fast evolving.

According to Obar et al[1], social media are computer-mediated technologies that

facilitate the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks. There is a huge and growing variety of social media services, such as social networks, blogs, micro blogs, business forums, social bookmarking services, enterprise social networks, photo sharing sites, video sharing sites and more. Despite the variety, some key common features can be identified[2]:

- Interactivity
- User-generated content
- Service-specific profiles created by the users on social media websites or apps maintained by the social media organization
- Facilitation of the development of online social networks

The initial social networks that came about at the dawn of the digital age did not gather mass appeal and petered out in a short span of time. Over time, the space has become more concentrated, with some social media companies having acquired a dominant status and a huge user base. Some of the most popular social media websites are Baidu Tieba, WhatsApp, Facebook, Google+, MySpace, Instagram, LinkedIn, Pinterest, Tumblr, Twitter, Viber, VK, WeChat and Weibo. Social network penetration worldwide is growing fast, thanks to the increasing spread of Internet, the ability of more and more people across the globe to access and afford mobile technologies, coupled with the network effect of social media. In 2017, 71 percent of internet users were social network users and these figures are expected to grow; in 2019, it is estimated that there will be around 2.77 billion social media users around the globe, up from 2.46 billion in 2017[3]. An enormous volume of content of immense variety is being published by the social media users at a break-brain velocity, as embodied in the concept of Big Data. To give a couple of indicative data points, more than 3.2 billion images are shared each day on social media, while Facebook alone witnesses 8 billion average daily video views from 500 million users[4].

What has this online social explosion resulted in? The next section gives a brief overview.

Impact of Social Media: A Snapshot

The tremendous growth in social media usage has been fuelled by the many opportunities it has created for individuals, communities, organizations and nations, and at large for the global society. These dividends have in turn further accelerated the adoption and diffusion of social technologies.

One of the foremost advantages of social media has been the unprecedented possibility of connectivity that it ushered in. It provides the opportunity for anyone with an internet connection to form a relationship with and engage in dialogue with any other digitally present individual or entity. This has also enabled thousands of disparate individuals to unite towards a common cause and launch various types of movements in ways that would not have been possible otherwise. The 2011 Jasmine Revolution in Tunisia, where people used Facebook to organize meetings and protest actions[5], and the India against Corruption movement of 2011 and 2012[6] are but two

examples. The ability to connect has been tapped by organizations too – in gathering market intelligence and resolving customer/ stakeholder issues, in marketing their products and services, and in bringing new ideas and innovation through means such as crowdsourcing and open innovation.

Social media has also improved manifold the access to information. Most public organizations and individuals reach out very actively to their stakeholders through the medium. It is also a massive educational tool, the potential of which is limited only by the bounds of human imagination and creativity.

The new digital age has led also to a restriction of the private sphere and an expansion of that portion of one's existence which is shared with the world – for both individuals and organizations. A key feature of social technologies that make all of the above possible is what Thomas L. Friedman described[7] to be one of the ten forces of the digital age that made the world flat – the power of self-publishing, or in other words, user-generated content. This has enabled anyone with an internet connection to be a public broadcaster, thereby giving voices to those previously unheard and excluded from public discourse. By obviating the need to own or have access to power centres in order to make oneself heard, social media has democratized what German philosopher Jürgen Habermas terms as the public sphere[8], defined by Asen as "a realm of social life in which public opinion can be formed"[9].

But that is half – or arguably less than half of – the story. The digital democratization has benefited various types of antisocial and nefarious elements too. Cyber-bullying, hacking of personal information and using it to damage one's reputation or for financial or identity theft, frauds and scams, cheating and relationship issues and loss of privacy due to security issues are some of the ills which have been facilitated by social technologies. There are even global terrorist organizations that use social media as a prime means of radicalization, recruitment and intelligence gathering[10].

A large share of the issues outlined above stem from some fundamental problems in how people deal with information in the digital space. This class of problems is elaborated in the next section.

Information Problems in today's Social Media Ecosystem

Social media has aggravated the longstanding problem of information overload. The volume, velocity and variety of online data and information have conspired to create a problem of plenty as regards information, which in turn has led to a pervasive attention deficit problem. As Herbert Simon says while introducing the concept of attention economy, "a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it"[11].

Another problem posed by social media is that of filter bubbles, a concept coined by Eli Pariser[12]. As explained by Pariser, this is a state of intellectual isolation, resulting from the personalized way in which social media and other online services supply information to individual users based on

their unique online profile and behaviour. The separation is caused due to the tendency of online algorithms to give preference to information that they judge to be agreeable to users, thereby distancing them from viewpoints and interests different from their own. Moreover, the way in which the algorithms make these personalization choices are often not transparent, Facebook's personalized news-stream being one example of such a non-transparent algorithm.

A related problem, due in large part to filter bubbles, is that of online echo chambers. An echo chamber represents a situation in which information, ideas and beliefs or beliefs are amplified or reinforced by communication and repetition inside a defined system[13]. By not giving adequate room for the natural expression of alternative ideas and viewpoints, the echo chamber effect reinforces one's current world-view, making it seem more correct and more universally accepted than it really is[14].

Research has established the presence of a general negativity bias in social transmission of information[15]. This is amplified on social networks and in particular by social media algorithms. Due to this, negative news, feelings and emotions are more likely to be processed and transmitted widely. It is said that this is one of the prime reasons for the high volume of digital content that contains bullying, misogyny, animosity, abuse and negativity in general.

Many social networks enable their users to easily create fake accounts or otherwise hide their identity, thereby providing them a high degree of anonymity. It has been observed that this online anonymity leads people to act differently than they would do otherwise; in particular, this has been shown to result in online behaviours which do not hold them accountable and which are more uncivil and amoral[16].

Fake news, an ill which has existed since centuries, has acquired a newfound significance in the new digital age. Producing and spreading misinformation has become easier than ever before, thanks to social media. This became a flashpoint and attracted global attention during the 2016 US Presidential Election, when the spread of fake news is reported to have had a significant role in influencing electoral outcomes. Governments across the world have recognized this as a serious issue and some countries have initiated consultations to counter the rise of fake news. The United Kingdom launched an inquiry into fake news in January 2017[17], which is being followed up by another inquiry[18] into the phenomenon. The Parliament of Singapore Parliament too has voted unanimously to form a committee of MPs that will recommend how Singapore should tackle the problem of fake news, including possibly passing new laws[19].

The dangers posed by the above phenomena are not of any small measure, especially in an age where our digital lives are occupying an increasingly bigger role in our 'real' lives, and in the way we think, act and live as individuals and as members of a society. These information problems have the potential to do significant damage to our collective social fabric, due to the power they hold in shaping our understanding of the worlds both around and within us.

Do we need a New Social Media?

It is due to this disaffection with the current social media ecosystem, that Tim Berners Lee, the founder of the World Wide Web, made a passionate call for a reinvention of social media [20]. Deploring the negativity and bullying of much of social media, Lee expressed the need for platforms that were both open and configured better to express "constructive criticism and harmony". His call has been reinforced by Martha Lane Fox, tireless campaigner for better use of the net, who has called for a social media with heart[21].

Given these invocations and the gaps in the current social media infrastructure as delineated in the previous sections, this paper seeks to explore the fundamental design features of the current social media infrastructure, from an information perspective. The broad contours for an improved social media ecosystem are examined concurrently.

Design Limitations in Current Social Media Infrastructure

It can be observed that there are certain design features that are common to most, if not all, of the social media services that exist today. These features have apparently been built into the system due to the vital role they play in the online communication process. However, these features have also introduced some fundamental limitations into the dynamics of social media, thereby paving the way for the information problems outlined before, and resulting eventually in a reduction in the quality of online as well as offline public discourse.

Erring on the Side of Incaution

Social media platforms give enormous power for users to share almost any piece of information, but mostly with little means to hold them to account for the same. This is facilitated and enabled by the ease to be anonymous – either completely or partially. Furthermore, in many cases, no action is taken by popular social networks even against known social offenders such as paedophiles.

What could be a possible explanation for the decision to let users err on the side of incaution? The causes for this seem to be varied. The social media companies either did not anticipate reckless online behaviour on the scale that is happening today, or found it to be incompatible with their business incentives or the principles of online freedom and individual liberties. The online market forces or the social media users themselves may have been thought to act as a sufficiently strong counterbalancing force against the malicious use of social media.

Irrespective of the provenance of this fundamental design feature, there are strong signs that the bad is winning over the good; we seem to have arrived at a place where the irresponsible exercise of the power to share information is contributing to the fracturing of our global and local societies. While social media services have begun to take some remedial steps in the recent past, they are far from enough; further, it is proving to be very difficult to rescue ourselves from the weight of the online information sharing precedents we have bequeathed to ourselves.

The Dominance of Numbers

Arithmetic is seemingly one of the fundamental building blocks of most social media services. Despite its uses, we examine how it is also proving to be a stumbling block for a better social media.

The popularity and importance of a social media account is judged most often by the number of followers it has acquired, the rate at which it is growing and the engagement levels of the social media content published by the account. In many cases, these are valid indicators of the attributes in question and hence useful signals to current and prospective followers. However, this has also led to an online rat-race to grow these numbers by various legitimate as well as questionable means. While the ethical means include techniques such as digital marketing, social media advertising and moreover a superior quality of social media communication, an industry has spawned which supplies fake followers and bots on demand which share and comment on content put out by client accounts [22]. A study has found that governments are too in the game to manipulate online media in this manner[23]. Getting a particular topic to trend is one of the primary means employed by interested parties involved in 'hashtag wars' on cyberspace; this too happens on the strength of numbers – on the frequency of content that is published. The ecosystem has thereby become polluted; a lot of what we get to see as followers, likes and trends are in many cases, fake and misleading.

This is important, since the extent of support a particular social media post or viewpoint has garnered is an important driver of the extent to which the particular piece of information eventually diffuses. This is not only due to the multiplier effect of networks, but also due to the human tendency to evaluate the worth of a piece of information by the degree of external validation it has received, measured on social media in terms of engagement (in terms of shares, 'likes', comments and so on) a particular post has fetched. By not checking unscrupulous elements from influencing these numbers in the service of their narrow interests, the current social media ecosystem permits the public sphere to sideline concerns and issues that better reflect public concern and to be hijacked by staged conversations, thereby undermining public dialogue and giving us a distorted view of the state of our world.

Designed for System 2, Run by System 1

Nobel prize-winner Daniel Kahneman argues[24] that the human mind is configured according to two basic systems – System 1 that is fast, instinctive, emotional and more prone to error; and System 2 which is slower and more deliberative. He says that it would be better if more decisions were subject to System 2 treatment, but that it is not possible in the fast-paced lives that we lead.

As Will Hutton observes[25], while our social media services seem to have been designed for System 2 thinking, System 1 thinking is the dominant thinking mode that operates. This is peddled not only by our instincts, but also by the emergent social media features which accord a high

premium on speed, on the now, and on "breaking news" and information. The very feature of social media trends is a reflection of the emphasis given to ongoing live conversations, as opposed to carefully processed and duly edited information.

Social Media Business Models

Another characteristic that may be limiting the evolution of a more inclusive digital space is the limited extent of business models that have evolved for successful and sustainable provision of social media services. It appears that the success of these services is dependent at present to a large extent on social media metrics which are not adequately indicative of the success of the services. In particular, the emphasis seems to be more on output metrics (such as user base and volume of conversations) and not so much on outcome metrics (such as the quality of the conversations and their contribution to improving people's access to correct information and helpful perspectives).

Directional Guideposts to an Alternative Social Media Ecosystem

Having examined a few fundamental gaps in the design of the social media infrastructure that exists today, we now briefly explore some directional guideposts to the evolution of an alternative ecosystem that makes more room for meaningful dialogue and a more healthy online behaviour.

It is posited that such an alternative ecosystem demands – first of all – a return to some basic values which we need to embrace afresh. As Will Hutton observes[26], citing the dichotomy highlighted by Daniel Kahneman between System 1 and System 2 thinking, there is a pressing need to cultivate and embed the culture of slowness in our information production, distribution and consumption systems. This is reflected in the Slow Media movement[27], as well as in the call by the likes of Tim Berners Lee and Martha Lane Fox for "a social media with heart that gives us time to think". There is a need to spread the realization that the virtue of faster access to information needs to be tempered - in many situations - by a conscious slowing down of our assimilation and absorption of this information. Such a slowing down is necessary in order to ensure a reasonably acceptable level of accuracy in our understanding. Accordingly, social media services may do well to build mechanisms to give slowness its due in situations where it is necessary. Would it be advisable and possible to devise systems which make a distinction between information that needs to be processed slowly and that which is required to reach its audience in a short span of time itself, and give them tailored treatment? This is one question for future inquiry.

Reduced reliance on numbers is perhaps another distinctive feature of the new social media infrastructure. There is a need to devise alternate mechanisms for diffusion of information, based on processes which give more weight to the content itself, and relatively less credence to the numerical padding it has received from the online audience. A rudimentary operationalization of this principle would be a situation where the number of retweets and likes of a tweet are hidden. The retweet would ensure the multiplication of the message, but this dissemination is more likely to happen due

to the message of the tweet, and less due to the influence exerted by the degree of support it has already received. Indeed, this approach does have its limitations; ingenious solutions are required.

There is a lot that leaves to be desired when it comes to the governance of social media platforms. The failure of social media companies to take adequate proactive or reactive steps against anti-social elements on social media is but one cue that highlights the need for better regulation and legislation of social media platforms and of cyberspace in general. Questions on regulation of social media often focus on behaviour of social media users; in most cases, regulation of individual online behaviour is neither desirable nor possible. An easier and wiser approach – both technologically and politically – would be to have a more expansive regulatory framework and legislative framework for social media companies themselves. The way algorithms are designed, the transparency of these algorithms[28], the provision of open Application Programming Interfaces (APIs), social media advertising, the funding of social media companies and transparency regarding ownership structure, the business model of social media companies and the steps taken for identity verification and protection are some of the areas which could benefit from a more conscious and proactive role of the state. This demands concerted action by local and national governments as well as multilateral bodies. Such collaborative projects are the need of the day.

Conclusion

An examination of the social media ecosystem that exists today shows us that despite its immense potential as a force for good, there are certain fundamental design problems that threaten the future of the global society. In a future where communication has become more important, more prevalent and more multifarious than ever before, the quality of the relationships we build and maintain with each other will occupy a more important role in the quality of our democracy and our public life. Social media has a vital role to play in shaping the quality of our shared public sphere. As global citizens and active participants in the shaping of our future society, it is essential that an alternative social media ecosystem, built on a different set of design principles and value systems, is evolved and adopted. A few directional guideposts that define such an ecosystem have been explored: slowness, a reduced reliance on numbers and a more active legislation and regulation of social media companies have been pointed out as some important pillars worth building on. Collaboration on a big scale is required in order to build a social media that is truly social – a 'social social media', in order to ensure a safer, more peaceful and harmonious future – a future:

"Where the mind is without fear and the head is held high,
Where knowledge is free,
Where the world has not been broken up into fragments,
By narrow domestic walls,
Where words come out from the depth of truth,

Where tireless striving stretches its arms towards perfection,
Where the clear stream of reason has not lost its way,
Into the dreary desert sand of dead habit,
Where the mind is led forward by thee,
Into ever-widening thought and action…[29]"

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GENDER INFLUENCE IN THE ONLINE PURCHASE OF PHYSICAL PRODUCTS

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Abstract

The study focuses on to find out the gender influence in the online purchase of physical products. In the literature review, it could be seen that there is a male domination in online shopping. The aim of the study is to know the involvement of female towards online purchase of physical products in Kerala. The study was descriptive and explorative nature. Since there are no lists accessible relating to the population due to the privacy concern, the population under the study is infinite. Non-probabilistic random sampling namely judgment sampling have been used in the study. Both online and offline mode used for data collection. It is found out that 64.5 percent respondents were male and 35.5 percent were female. Male spent more amount in online shopping than female. Cash-on-delivery mode of payment was more used by female due to the privacy and security concern. E-wallets are not so popular in Kerala. The most preferred three times among female were books, apparels/bags/footwear and fashion accessories. To conclude, female made more online purchases related with home appliances/furnishing, books, kids items, beauty products and fashion accessories than male.

Keywords

Online purchase, online shopping, gender influence, Kerala ecommerce, physical products

E-commerce is associated with the buying and selling of information, goods & services, via computer networks. The arrival of the commercial use of the Internet, driven by its World Wide Web subset, has been defining the new E-commerce since 1993(Zwass, 1996). Doing business by using these networks is called e-commerce(Simon, George, & Soju, 2011). Bajaj & Nag (2004) stated that information and Information Technology are the new drivers of the technology era. **New Economic Policy 1991 (LPG) and IT revolution** open up accessing information beyond the national boundaries. It helps to conduct traditional commerce through automated transferring and processing of information. It provides a universal platform to support commercial/ business activities across the globe.

As per the report of Tutorialspoint (2014), it is mainly related to the paperless exchange of business information by using electronic Data Interchange (EDI), Electronic Mail, Electronic Bulletin Board, Electronic Fund Transfer (EFT) and other network

based technologies. It connects people worldwide without geographical barriers. Online shopping enables the consumers to make online purchase from anywhere at any time without any time restrictions or traffic jams(Li & Gery, 2000). In the literature review, it can be found that male is more influenced with e-commerce than female. In the early stage, the involvement of male in browsing internet was more than female. Now the situation has changed. Female also have got equal status in job, education, family and income. Female is also proficient in e-commerce.

Statement of the problem

The demographic variables have its own importance in the case of online purchase. Case et al. (2001) pointed out that internet knowledge; income and education are the powerful demographic variables influencing online shopping. Bellman et al.(1999) stated that the online population is relatively younger, more educated and wealthier. The Male and female have equal role in the development of a nation. Status of female in India has been changing. The study proposes to know the gender influence in the online purchase by answering the following questions.

1) Is there any gender difference in the amount spent in online purchase?
2) Is there any gender difference in the mode of payment used in online purchase?
3) What are the gender differences in the selection of physical products in online purchase?

Significance of the study

E-commerce Foundation (2016) reported that the global growth rate of e-commerce is 19.9percent and about China its 33.3 percent. But Indian ecommerce growth rate is 129.5 percent that shows the prospects of the country in e-commerce field. The report also pointed out that the internet penetration in India is 27 percent out of which only 8.7percent have e-shopping exposure that indicates enormous potential in Indian e-shopping scenario. Female also come into the economic world of the nation. She has got education, job, and equal status by the support of law. In practice, female is more reluctant to use e-commerce by using credit/debit card, internet banking due to the privacy and security concern. There is no study in Kerala related with the gender difference in online shopping. Hence this study is proposed to find out the gender difference in the online purchasing of physical products.

Objectives

1) To study the gender differences towards the highest amount spent in a single online purchase of physical products.
2) To identify the gender differences towards the mode of payment in e-commerce.
3) To examine gender differences in the selection of physical products towards e-commerce.

Hypothesis

1. H_0: There is no significant association between gender and the highest amount spent in a single online purchase of physical products.

2. H_0: There is no significant gender influence in the mode of payment in e-commerce.
3. H_0: There is no significant gender difference in the selection of physical products in e-commerce.

Methodology of the study

The present study aims at understanding the gender influence in the online purchase of physical products in Kerala. The study is descriptive and analytical in nature. The target population of the study is the entire online customers who have used top B2C websites namely Amazon, Flipkart, Myntra, Snapdeal and Jabong for online purchase of physical products such as food, groceries, home appliances/furnishing, automobiles, books, desktop/laptop & accessories, mobile & accessories, kids items, apparels/bags/ footwear, beauty products and fashion accessories. Since there was no record made openly accessible related to the population due to the privacy concern, the population under the study is infinite. Hence, Samples were collected by using non-probabilistic random sampling technique namely judgment sampling. Both online and offline mode have been used for data collection. In online mode, data were collected by using online questionnaire which was developed through Google Form and sent its link through emails and social medias. In offline mode, data were collected by distributing questionnaire directly to customers. Both primary as well as secondary data were used for the study. Secondary data were gathered from journals, magazines, books and websites. The table 1 shows the details of collected data.

Table 1: Classification of total number of respondents under the study

Mode of Data Collection	North Kerala	Central Kerala	South Kerala	Total no of respondents
On-line	80	105	90	275
Off-line	130	113	125	368
Total	**210**	**218**	**215**	**643**

Source: Primary Data

A total of 275 data were collected through online mode and 368 data were collected through offline mode by dividing Kerala into three zones as north Kerala, central Kerala and South Kerala.

Analysis of the study

Table 2: Gender wise classification of Online Customers

Demographic Variables		Frequency	Percent
Gender	Male	415	64.5
	Female	228	35.5
Total		643	100

Source: Primary Data

From the table 2, 64.5 percent of online customers were male and the balance of 35.5 percent online customers was females. It is understood that online customers are more males than females. The report of Mukerji (2015) based on Flipkart survey stated that the adoption of new technological changes in the business world like e-commerce has been done by men(69%) more than women. The gender pattern of various studies proved the male domination in e-commerce such as 77.07% (Sudeep, 2008), 62.5%(Wu, 2011).

Table 3: Gender wise classification towards the highest amount spent on online purchase of physical products

Amount spent	**Male**	**Female**	**χ^2 value**	**Sig**
Below Rs1,000	7.2%	11.8%	10.186	0.000**
Rs 1,001 – Rs 2,000	9.9%	33.4%		
Rs 2,001 – Rs 5,000	21.9%	29.8%		
Rs 5,001 – Rs 25,000	**45.1%**	**24.6%**		
Above Rs 25,000	**15.9%**	**0.4%**		
Total	100%	100%		

Source: Primary Data
** Significant at 1% level

Table 3 shows that 61% male spent more than Rs 5,000 but only 30% of female spent more than Rs5,000. The result of chi square test (χ^2 =10.186 and p=.000) indicates that there is significant difference in gender regarding the highest amount spent in online purchase. It is concluded that **males spent more amount in online purchase than that of female.**

Table 4: Gender wise difference in the mode of payment in e-commerce

	Modes of payment	**Male**	**Female**	**t value**	**Sig**
1	Credit and debit card	3.74	3.30	1.615	0.001**
2	Internet banking	3.22	3.02	5.159	0.023*
3	E-Wallets	2.43	2.36	1.440	0.231
4	COD (Cash on Delivery)	2.73	2.88	2.282	0.131

Source: Primary Data
** Significant at 1% level & * Significant at 5% level

The most preferred mode of online payment in e-commerce is credit and debit card, followed by internet banking and Cash-On-Delivery. The least preferred mode of online payments is e-wallets in Kerala.

The result of independent sample t test (p value =1.615 and p=0.001) indicates that there is a significant difference in gender regarding the usage of credit/debit card in e-commerce. Male (mean 3.74) used credit/debit card more than female (mean 3.30) in e-commerce. In the case of internet banking, there is a significant difference in gender as per the result of independent sample t-test (t value= 5.159 and p=0.023) and the mean value shows that internet banking is more used by the male (3.22) than that of female (3.02). The cash-on-delivery mode is more used by the female than male. There is no gender difference in the case of cash on delivery and e-wallet. E-wallets are not so popular in Kerala as both males and females gave least preference to e-wallets.

Table 5: Gender wise classification of online purchase of physical products

	Products	Male	Female	Total	t value	Sig
1	Food/groceries	2.19	2.04	2.14	4.982	0.026*
2	Home appliance/ furnishing	2.75	2.87	2.80	2.201	0.000**
3	Automobiles	2.25	2.15	2.19	0.159	0.690
4	Books	2.89	3.33	3.05	0.004	0.947
5	Desktop/laptop & Accessories	3.25	2.81	3.10	2.089	0.024*
6	Mobile & Accessories	3.54	2.94	3.33	1.460	0.000**
7	Kids items	2.36	2.51	2.41	0.253	0.615
8	Apparels/bags/footwear	3.43	3.18	3.34	2.990	0.084
9	Beauty Products	2.51	2.63	2.55	0.087	0.768
10	Fashion Accessories	2.84	3.04	2.91	5.322	0.021*

Source: Primary Data ** Significant at 1% level & * Significant at 5% level

Based on mean score, Apparels/bags/ footwear (3.34) is the most preferred items in E-Commerce, followed by Mobile & accessories (3.33), Desktop/laptop & accessories (3.10) and Books(3.05). The least preferred item in E-Commerce is Food, groceries (2.14), followed by Automobiles (2.19) and so on. In the case of male, the most preferred three items in e-commerce is mobile & accessories (3.54), followed by apparels/bags/footwear (3.43) and desktop/ laptop & accessories (3.25) and in the case of female, it is books (3.33), apparels/bags/ footwear (3.18) and fashion accessories (3.04). Female made more online purchase of home appliance/furnishing, books, kids items, beauty products and fashion accessories than male.

In the case of food/groceries ($t = 4.982$ and $p = 0.026$), home appliance/ furnishing ($t = 2.201$and $p = 0.000$), desktop/laptop & accessories($t = 2.089$and $p = 0.024$), mobile & accessories ($t = 1.460$ and $p = 0.000$) and fashion accessories ($t = 5.322$ and $p = 0.021$), there is a significant difference in gender regarding the online purchase. But there is no significant difference in gender regarding the online purchase of automobiles, books, kids items, apparels/bags/footwear and beauty products.

Discussions

The basic objective of the study was to examine the effect of gender on online purchase of physical products. Chi square test and independent sample t test was applied to test the hypothesis. The study examined the role of gender in online shopping of physical products. The findings of the study revealed that male has done online shopping more than females. Male is more involved in e-commerce as new technological changes in the business world have been adopted by male than female. Privacy and security are the main concern of female in the online shopping. The study shows that the attitude of female is also changing and started to move into the digital world. In the case of payment, male spent more amounts in online shopping than female. The trend of cash-on-delivery payment is declining and both male and female moving to use credit/debit cards and internet banking. E-wallets are not so popular in Kerala as the least payment mode opted by both male and female was e-wallets. Female made more online purchase of home appliances/furnishing, books, kids items, beauty products and fashion accessories than male. In the case of food/groceries, home

appliances/furnishing, desktop/laptop & accessories, mobile & accessories, fashion accessories, it can be seen that there was a significant differences in gender towards online shopping. To conclude, it can be seen that female come forward and be part of the trend of online shopping.

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DIGITALIZED ECONOMY - A COMPARATIVE STUDY ABOUT TRADITIONAL CRM AND MOBILE CRM

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Abstract

Developing close, cooperative relationship with customers is the requirement of modern business organizations. In the current era of digitalization, intense competition and demand oriented markets, there is paradigm shift in the marketing strategies of business organizations, which were earlier focused on product or service called as product or service centric approach but now it has been shifted to customer centric approach. Digital Marketing in India is spread to almost all the business sectors. The power of digitalization allows geophysical barriers to disappear making all consumers on earth as potential customers. Digitalization allows business to communicate and form a transaction anywhere and anytime. Customer relationship Management helps to track and analyze all the interactions of companies with customers and prospects. It makes speedy personalized communications that enables the customer to feel valued and special. Effective use of CRM systems can assist the organization's relationship-building activities. Technological developments in CRM continue to affect the organization and its marketing of products and services. These technological developments include mainly the computer and mobile telephone technology. Many aspects of customer relationship management rely heavily on technology; however, the strategies and processes of a good CRM system will collect, manage and link information about the customer with the goal of letting organizations to market and sell products or services effectively.

The presentation is a significant step forward to understand traditional and mobile CRM platform to handle and track customer service.

Keywords

CRM, Technology, Digitalization.

1. Introduction

CRM (customer relationship management) describes all aspects of interactions that a company has with its customers, whether it is sales or service-related. It includes various strategies and techniques to maintain healthy relationship with the organization's existing as well as potential customers. Retaining customers involves devising marketing strategies which are customer-centric. Hence, there is a drastic shift from product-centric approach to a customer-centric approach which implies making customers a

part of the organization.The idea of CRM is that it helps businesses to use technology and human resources to gain insight into the behavior of customers and the value of those customers. The communication between customer and business is the core element in managing relationship with customers. Finding a way or a source of communication is an easy task but using that media to acquire new customer, maintaining relationship with the existing customers and their retention is difficult to perform. It means to use communication media as a strategic or competitive tool needs real efforts.The CRM system helps to automate this by keeping a record of every communication organization has with the customer. CRMs can also bring all this information together into reports that help with forecasting.

CRM processes help to identify and target best customers, generate quality sales leads, plan and implement marketing campaigns with clear goals and objectives. It's about investing time in your current customer base with the aim of retaining their custom and increasing their spending on company brands. CRM is the tool to gather and integrate customer knowledge. CRM automates a lot of the usual time-devouring, non-sales-related tasks, giving salespeople more time to spend in front of potential customers instead of shuffling paper which makes everyone happy.

Mobile CRM services are becoming a substantial phenomenon; they have insofar not been well explored. In effect, despite there is some empirical research about traditional CRM solutions and electronic CRM, there is no research which focuses on the comparative study between traditional CRM and Mobile CRM in the modern digitalized economy context. The primary purpose of this paper is therefore to fill this gap by assessing both forms of CRM.

2. Objectives

a) To study about Traditional and Mobile CRM

b) To identify major difference between Traditional and Mobile CRM

3. Methodology

This study is based on the analysis of the secondary data published in the magazines and websites.

4. Literature Review

Arpita Khare & Sapna Rakesh (2012). Companies are increasingly using technology to target their customers and build relationship with them. Customer relationship management is perceived as a strategy which harnesses technology for providing more value to customers through customized products and services. However, technology now extends beyond the peripheries of Internet to mobile-based systems.

Sharma Deepti & Ranga Mamta (2014) The communication between customer and business is the core element of managing relationship with customers. Consumers are flocking to services such as Facebook, Twitter, LinkedIn, and YouTube but compared to other channels, the mobile medium has an exceptional ability to reach people.

Khodakarami, F. & Chan, Y. E.(2014). Knowledge represents a critical asset for organizations in today's economy. Successful

organizations need dynamic capabilities to create, acquire, integrate and use knowledge. This study draws on and extends knowledge creation theory by proposing and investigating the nature of precise, three way interactions between CRM systems, customer knowledge and knowledge creation processes.

Jelonek Dorota (2015). The paper demonstrate that social CRM systems are an effective support in managing the relationships with customers, especially in the areas of customer information management and customer communication. It was showed that social CRM systems may effectively support customer relations and usage of its potential.

Vani Haridasan& Dr. Shanthi Venkatesh (2011). This paper set out as a contribution to current practices of CRM by the mobile service providers. The research was an attempt to analyze the effectiveness of CRM technology, being extensively used for a specific purpose of moving closer to the customer. The study analyzed the effectiveness of CRM on three loyalty Indices which relate to the concept of Word of Mouth, Cross-selling and Up-selling.

Dr. Farooqi Rashid, M. D. (2011), The author states that e-CRM is essentially the adaptation of CRM in e-commerce environment and helps to build and sustain customer relationship using the net. The companies need a new approach e-CRM to leverage the internet unique strength for capturing customer. CRM implementation is costing and time consuming on the other hand e-CRM is very fast with less operational cost.

Sunny, E. E and Abolaji, S.O.(2016). The study founds that the internet is increasingly providing a veritable ground for the use of various on-line based facilities to both expand market share and elevate revenue level. Electronic CRM and its usage has become the opium of competitive business as the traditional methods of customer attraction, customer retention and management can no longer subsist for the 21st century customer if the business intends to remain a going concern.

Winer, R. S. (2001). The study develops a comprehensive CRM model incorporating seven phases: database creation, analysis of the database, customer selection, customer targeting, relationship marketing, privacy issues, and new metrics necessary for evaluating the CRM effort. It has been established that profit comes from repeat customers, they generate over twice as much gross income as the new customers.

Kordalipoor. M, Shahhosseini R & Hamidi. K (2015) The study identifiedcritical success factors which serve as the basis to explore the success for CRM execution. These are information quality, system quality, service quality, top management support, and technological readiness, key customer focus, CRM organization, knowledge management, and technology based CRM.

Rajnish, J, Sangeeta, J. and Upinder, D. (2003) An effective or successful implementation of the CRM system can contribute to the organization in terms of improved sales, market share profitability, customer satisfaction and reduced customer turnover, service cost and time.

Verma, D., Dr. Verma . D.S. (2013). The study found that Mobile CRM is an efficient tool that will make great adjustments, savings and benefits for organized retail outlets. Mobile-CRM system has very low costs and a great impact on the customers.

Torggler, M.(2008). The Functionality and Usage of CRM Systems are referred In this paper. The actual usage of CRM systems and the usage of the different functionalities in the areas of collaborative, operational and analytical CRM are also explained.

Payne, A., Frow, P(2005) identify five key cross-functional CRM processes: a strategy development process, a value creation process, a multichannel integration process, an information management process, and a performance assessment process.

Trainor, K.J., Andzulis, J.M., Rapp, A. and Agnihotri, R. (2014) In this study about social media and CRM, found that investment in social media could bring relationship management benefits, but the use of social media alone does not have a direct effect on relationship performance; the usage of social media tools can develop capabilities that allow firms to better serve their customers.

Lan Wang (2016) The meaning of the digital CRM is a digital customer experience that is specially built and customer-oriented. It is a business reform that improves value creation. There is a need that every company must turn into a digitized company, especially the digitization in the CRM field. Companies' should also change strategies according to changes of the competition environment.

M. PrasannaKumar .,T. Sanjeev Kumar (2014). Managers requires leadership skills in driving forward a customer-centric culture within the e business. E-business is playing vital role in the competition towards CRM.

5. Traditional CRM

Traditional CRM strategy is mainly based around collecting data and information on customers and potential customers, who are entered into a system that allows a company to better segment the target audience .This strategy never builds long-term relationships between a company and a customer or potential customer. It is a strategy and philosophy that was based on how to manage customers using tools, processes and systems to understand about customers and at the same time it provides business with ways of identifying the life cycle of those customers. The driver for its initial success was sales and organizations manage customers in a way that increases the chances of closing deals. The traditional model associated with CRM was based around providing better products and services to the customer - and also good customer service. It was a sales driven model to some degree.

6. Mobile Technology Impacts on CRM

Technology and the Internet have changed the way companies approach customer relationship strategies. The mass migration of internet users from desktop computers to mobile devices is global and universal. Mobile CRM is an exciting

development within the wider field of CRM. Mobile Customer Relationship Management is a CRM tool designed for mobile devices including smartphones and tablets. It is an application that enables one to keep track of the customer relationship management activities on the smartphones and tablets with the same functionalities of the CRM software but with better mobility, convenience and on-time delivery performance. It enables remote employees to interact with prospects and customers on their mobile devices. Outside sales associates require many of the same call features used for inside sales, and mobile CRM is positioned well to provide them. Importing call and SMS records or contacts directly from a mobile device saves a tremendous amount of time with data entry while reducing the risk of data error. Mobile usage is rapidly growing and sales teams around the globe are out in the field meeting potential customers increased the demand for mobile CRM. Cheap smart phones with more affordable mobile internet plans helped to take Mobile CRM to the next level. Mobile CRM hascompletely changed the way CRM is thought and used in India. Now it has become one of the biggest productivity tools for sales and service teams.

7. Development stages of CRM.

The development of CRM technology can be viewed from the perspective level of information technology applied in building customer relationships. Six stages can be identified in this development process. Customers feed in a good amount of data about them into the records of the company at the first contact itself that all transaction details are recorded manually relates to the first phase. Technology is a key facilitator in the execution of the CRM strategy. Organizational readiness and careful planning and analysis including the development of targeting tools and decision rules for targeting specific customer is used in the second phase. Instead of adhering to the traditional reactive customer service model, waiting for customers to contact them – online interaction have taken a more proactive approach. With wide spread usage of internet across the country and broadband becoming cheaper, CRM is accessible to almost everyone and everywhere in India. Many companies in the businesses thrive by opting for the net in handling customer relations and providing service to the customers is the third stage. The integration of Telephony and CRM has led to the popularity of Call Centre or better known as Contact Centers. Initially this was accomplished by own Premise telephony Servers. These are now being replaced by Cloud Telephony Solutions. It has become crucial for businesses to use telephony solutions to engage with their customers represents the fourth phase. In the fifth phase Consumers and buyers are relying on social media to a great extent for their buying decisions. Finally the Mobile CRM is on the rise in the world of CRM and demand is growing as companies and employees are demanding access to crucial information in real time. Allowing for a more versatile, mobile workforce and faster access to information, mobile CRM is here to stay.

The Key phases in the development of Traditional CRM to mobile CRM

I	Non-IT assisted CRM methods such as manual recording systems and customer Surveys.
II	IT-assisted CRM and organizations decision making, use of: call centers; fax; mail; and spreadsheet databases
III	IT automated CRM making use of internet and Ecommerce
IV	The integration of Telephony and CRM through call center.
V	Social CRM: - use of social media services, techniques and technology to enable organizations to engage with their customers.
VI	Mobile CRM: - By connecting through mobile CRM, Organization allow their sales team's access to customer data through a mobile CRM app or through a web-based browser with cloud.

8. CRM in the Digitalized economy

A digitally enabled enterprise engages with both current and prospective customers through digital CRM applications. It also moves an enterprise from non-value-adding tasks by automating them and helping it to focus on actionable insights, which is key to both top and bottom lines. Companies need to quickly improve their digitization capabilityand build digitization technology platforms due to digitalization of economy. Digital CRM is enabling companies to monetize customer engagements, thereby increasing wallet share. Digitalization also puts more lights on innovation and in new business models of customer relationship management. Digital technologies also offer businesses the ability to innovate and achieve higher efficiencies through improved communication. Adoption of digital payments has also witnessed a massive growth with a shift in behavior change as more people adopt digital payments in daily life. Given the unique nature of mobile -a single phone number, Marketers can now learn customer habits and offer more proactive services, such as personal assistants to provide accurate guidance. Mobile is in mainstream now, and will continue to grow and dominate. Marketers now need to put mobile at the center of the business channel to keep relation with customer. Usage of mobile applications has become increasingly prevalent across mobile phone users. Mobile apps are playing an ever-increasing role within all sectors of Industry. CRM applications are commonly used to manage a business-customer relationship; however, CRM apps are also used in the same way to manage business contacts, clients, contract wins and sales leads. Digitalization has changed the rules of the game for both the customer and the enterprise with a new model of value-added engagement where both can win.

9. The Functions of CRM System

Many companies use customer relationship management systems to coordinate and manage their interactions with customers. CRM may be defined "as the cross-functional integration of processes, people, operations, and marketing capabilities that is enabled through information, technology and applications". Due to the CRM functions it can be divided into three basic types -

operational CRM, - analytical CRM, - collaborative CRM. Operational CRM, often referred to as front-office CRM, covers most areas of customer - company contact. CRM applications collect process and store data about customers, so that later this data can be used in analytical CRM. Analytical CRM is also known as back-office CRM. Analytical CRM supports organizational back-office operations and analysis. It deals with all the operations and processes that do not directly deal with customers. Analytical CRM is designed to analyze deeply the customer's information and data, it disclose the essential convention and intension of behavior of customers on which capitalization can be done by the organization.Primary goal of analytical CRM is to develop, support and enhance the work and decision making capability of an organization. Most of today's CRM vendors develop their own analytical CRM. Collaborative CRM, also called the interactive CRM, are applications, which support various forms of contact with customers, especially by using modern technologies of electronic communication. The usage of internet in business and changes in the virtual environment made it necessary to modify CRM system.

10. Difference between Traditional CRM and Mobile CRM

Major area of difference	**Traditional CRM**	**Mobile CRM**
Customer contact	Customer contact initiated through traditional means of retail store telephone and fax.	Customer contact initiated through SMS and Mobile applications.
Enterprise Level Security	Less secure. Public also get information.	Remote access introduces plenty of security concerns.
Information to clients	Web enabled applications:- require a computer to download various application.	No such requirement customer get information on mobiles in message form.
Personalization of information	Personalized view for difference audience is not possible.	Highly individualized, dynamic & personalized views are possible.
Record search time	Difficult to locate customer records, search time is more.	Able to quickly locate specific records and customer information.
Multi-task with multi-window navigation	For multi-tasking there is a requirement of computer terminal. Multi window navigation is difficult.	Multi-task and instantly switch between open CRM records, views, and searches. Users can even leave Mobile Access and review an email, or even receive a customer call, and return to the same screen they were using just as they left them.
Real-Time Analytics in the sales field	Difficult to provide real time analytics to sales team.	Real time analytics is possible. Real-time analytics provides actionable insights while the sales team is still in the field.
Shape of the Processes	Sales transaction is a focal objective.	Complex relationships consist of relevant and worthwhile interactions that aim to meet the clients' demands and needs.

11. Managerial implication of Mobile CRM to an Organization

- One of the key implication of this form of CRM is that it enables a versatile and mobile connection to the totality of customer data from anywhere in the world. This also entails that, once gathered, new customer data can be inputted into a company's system from anywhere in the world.
- Enhanced ability to target profitable customers: -It filter and screen the most profitable customers to ensure that the sales team spend time and resources on those customers that clearly meet your long-term growth objectives.
- Another important value in mobile customer relationship management lies in its convenience, mobility and ease of use.
- It increases revenue for field sales teams due to the flexibility to visit more clients and close more deals, sooner increases customer satisfaction.
- Implementation of mobile CRM helps in the shortening of the sales cycle. Closing sales with fewer interactions allows a sales representative to dedicate more time to prospecting or working on new opportunities. By having all the required information at their fingertips, sales people are no longer wasting time looking for contact information or trying to recall what was the last conversation they had with their prospect.
- Senior Managers can access real time sales reports from representatives who are on the road. They can set alerts to be informed when a new deal is closed and remotely provide valuable coaching to their representatives on the field. Instead of waiting for monthly or quarterly reports.
- A mobile CRM allows organization to sell, market, and service more attractively. Sales teams are no longer confined to cubicles for eight-hour workdays; instead, they are always on and always connected.
- The sooner an order is placed; the sooner the final product or service is ready to be delivered which in turn translates to shorter delivery times and more satisfied customers.

12. Conclusion

Most leading research firms and pundits agree that digitalization will first impact businesses in the places they interact with customers – across sales, service, and marketing, whether online or in the store.A digitally enabled enterprise engages with both current and prospective customers through digital CRM applications.Having a Mobile CRM is no longer optional, all leading organizations are using it for their business development.

This study aims to conduct a literature review on Traditional CRM and Mobile CRM. For this study,our observations have confirmed that Mobile CRM models based on modern technology and concepts serves far better than traditional CRM in view of modern digitalized economy. For this study

many journals and websites has been reviewed. Furthermore, as this study was conducted for a limited period, it could be possible that we missed some previous findings regarding this topic as well.

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HAS DEMONETISATION PUSHED DIGITALISATION IN INDIA? SOME COUNTER EVIDENCES

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Abstract

India experienced its third episode of demonetisation in November 2016, when high valued denomination notes of Rs 500 and Rs 1000 was withdrawn at a single stroke which extinguished about 86% of the total currency value in circulation. Though the act of demonetisation was not unprecedented in its own history, the way it was executed took many by surprise and drew widespread criticisms both from academia and public. Demonetisation which aimed to curb black money, terror funding and counterfeiting at the first place was later projected as the government's push for digitalisation drive. Ever since then, the earlier objectives have taken a backseat and pushing India towards a cashless economy seems to be the prime objective. In this paper, we analyse the effect of demonetisation on digital payments viz. debit card, point of sale (POS) transactions, E-wallets and mobile banking using an intervention analysis of time series. The study finds out that while card value as a percentage of the transaction has increased after demonetisation, the share of POS transaction and mobile transactions has declined along with an increase in the share of ATM transactions and IMPS transactions. The study finds enough evidence against the digitalisation drive.

Keywords

Demonetisation, Digitalisation, Intervention Analysis, Pulse-function, Step- Function

JEL classification: *E42, C01, C21, G28*

1. Introduction

India experienced its third episode of demonetisation in November 2016, when high valued denomination notes of Rs 500 and Rs 1000 was withdrawn at a single stroke which extinguished about 86% of the total currency value in circulation. Though the act of demonetisation was not unprecedented in its own history, the way it was executed took many by surprise and drew widespread criticisms both from academia and public. Demonetisation which aimed to curb black money, terror funding and counterfeiting at the first place was later projected as the government's push for digitalisation drive. Ever since then, the earlier objectives have taken a backseat and pushing India towards a cashless economy seems to be the prime objective. It was presented as a panacea and claimed that move towards cashless economy will address the problems of unequal exchange. The government seems to make people believe that demonetisation is the magic

wand to push the economy to a cashless society.In this act of haste, the government even seem to have forgotten about the necessary infrastructure needed to realise the 'dream' of a cashless society and also about the cash dependent nature of the people. According to the World Bank Global Findex Data, in India, a meagre 4% of the total wage recipients (aged 15 years and above) reported using a bank account to receive wages in 2014. The share was even lower for rural areas at 2.96%. Among the poorest 40% of the households, only 1.7% of the adults reported the use of an account to receive wages in the past year. These figures clearly suggest that cashless payment constitute only a minuscule share of the total transactions in the Indian economy.

Post demonetisation, the Government and the Reserve Bank of India seems to promote the use of digital payments. There are mainly five modes of transactions that are increasingly being promoted. These are Unified Payment Interface (UPI), mobile wallets, Unstructured Supplementary Service Data (USSD), debit card and Aadhaar Enabled Payment System (AEPS). Amongst these, UPI, USSD and AEPS are introduced and implemented exclusively by the government. However, the growth of digital payments remains confined to a small section of the society (Sood and Baruah, 2017).

The digital methods of payments have seen a drastic increase over past years. This is further strengthened by the financial inclusion drive and growing popularity of debit cards. The already growing trend of rising digital transactions was further necessitated when the move to extinguish 86% of the total currency value in circulation as announced.One year down the line, it is high time to analyse the effect of demonetisation in enhancing the digital transactions in the economy. The study seeks to examine whether the impact of demonetisation was a one time change or of permanent nature.

2. Objectives

- To analyse the trends of payment instruments for transaction
- To find the impact of demonetisation on usage of payment instruments

3. Data and Methodology

The study uses monthly data from April 2011 to August 2017 which is sourced from the RBI website. The variables used in the study are the total value of card transactions, the total value of point of sale(POS) transactions, the total value of ATM transactions, the total value of mobile transactions (includes Mobile wallet and mobile banking transactions) and the total value of IMPS (Immediate Payment Service) transactions. All the variables have been converted into percentage terms by dividing by the total value of transactions.

The effect of demonetisation on the above variables that measure the extent of digitalisation is analysed by using the method of intervention analysis in time series. Intervention analysis in time series refers to the analysis of how the mean level of a series changes after an intervention when it is assumed that the same ARIMA structure for the series holds both before and after the intervention. Intervention analysis

has been successfully used to study the impact of air pollution control and economic policies (Box and Tiao, 1975), the impact of Arab oil embargo (Montgomery and Weatherby,1980) and many others.

There are two common types of intervention variables: A step function and pulse function. The former represents an intervention occurring at time T that remains in effect thereafter while in the latter case the effect is a one-time phenomenon.

Suppose that the ARIMA model for x_t (the observed series) with no intervention is

$$x_t - \mu = w_t \frac{\theta(B)}{\Phi(B)}$$

with the usual assumptions about the error series w_t.

Θ(B) is the usual MA polynomial and Φ(B) is the usual AR polynomial.

Let z_t = the amount of change at time t that is attributable to the intervention. By definition, z_t = 0 before time T (time of the intervention). The value of z_t may or may not be 0 after time T.

Then the overall model, including the intervention effect, may be written as

$$x_t - \mu = z_t + w_t \frac{\theta(B)}{\Phi(B)}$$

basically, in this study, two types of intervention models are used

(i) Constant permanent change (Step Function)

A constant permanent change equal to δ after the intervention can be written as

$Z_t = \delta I_t$

Thus $Z_t = \delta$ for all $t \geq T$ and $Z_t = 0$ for $t \leq T$

(ii) An immediate change that eventually returns to zero (Pulse Function)

This can be modelled as follows

$$Z_t = \frac{\delta}{1-\omega B} P_t$$

with $P_t = 1$ when $t = T$ and $P_t = 0$ otherwise. Assume $|\omega_1| < 1$.

When there is only one group under study (no comparison groups) the standard ITSA regression model assumes the following form (Huitema and McKean [2000a], Linden and Adams [2011], Simonton [1977a], Simonton [1977b]):

$$Y_t = \beta_0 + \beta_1 T_t + \beta_2 X_t + \beta_3 X_t * T_t + \mu_t$$

Where β0: intercept; β1: slope prior to intervention; β2: change in level in the period immediately following intervention initiation (compared to counterfactual); β3: difference between pre- and post-intervention slopes.

4. Review of Literature

This section provides an overview of previous research on demonetisation and the e-payment system in India.

The prime objective of demonetisation was to purge "black money" from the economy, generated by income that has not been declared to the tax authorities and reduce corruption, as also reduce the amount of counterfeit notes in circulation used to fund terrorist activities (RBI 2017a; Economic survey 2016-17). Economic survey (2017) states that demonetisation has been a radical step with short-term costs and long-term benefits. Follow-up actions such

as remonetisation, further tax reforms, including bringing land and real estate into the GST, reducing tax rates and stamp duties, etc. would minimize the costs and maximise the benefits of demonetisation and also would allow growth to return to trend in 2017-18, following a temporary decline in 2016-17. Kawadia, & Gupta (2017) finds that both-fiscal and monetary variables of the economy have improved in post demonetisation period. Fiscal deficit and revenue deficit shrunk as an effect of an increase in the net tax revenue to GDP in the third quarter. The value of rupee appreciated in those days and inflation experienced a reduction in its pace.

Demonetisation has impacted various sectors of the economy in varying degrees; however, in the affected sectors , the adverse impact was transient and felt mainly in November and December 2016. While demonetisation posed negative risk to the gowth in GVA, its impact on inflation mainly stemmed from moderation in food inflation. It also had a significant impact on balance sheet of commercial banks as well as in financial markets which was however transient (RBI 2017a).

But it has created a significant adverse impact on the informal sector, especially of low-income households and small business units (Bhattacharya, Mitra, Pal, & Saha 2017). Some retail outlets were affected severely and experienced a fall in their sales, profits and orders (Agyeman, & Amoah-Binfoh 2017). Ghosh (2017) develops a macro-theoretic model to examine the likely impact of demonetization in India and stated that affects the poorer segments of the people the most. This paper validates that demonetization is likely to bring about the cumulative decline in output levels in both the organized and the unorganized sectors. The intensity of the decline depends upon how fast the economy is remonetized. If it is delayed, the contraction in output levels may cause considerable harm to the masses. Closer attention should have been done on this sector before rushing to policy formulation, mainly because the short-term changes in this sector are beyond the government radar.

The government was criticised for coming up with digital promotion as an afterthought as the stated objectives of eliminating black money were not met. This is probably the first time in India that Union Budget focused specifically on digital economy initiatives. According to European Commission, the digital economy is the single most important driver of innovation, competitiveness and growth. Significant and revolutionary developments have taken place in the recent past like launch of many digital wallets like – Paytm, Mobiwik, Free Charge etc. and UPI (Unified Payment Interface) initiative and BHIM app of government for a smooth transition to digital payments (Ali, Akhtar, & Safiuddin 2017). Technologies such as India's biometric identification system (Aadhaar) do in principle help unbanked citizens obtain the digital identity that is needed to transact in a cashless economy (Masiero 2017).

Economic survey (2017) points out that digital transactions amongst new users (RuPay/ AEPS) increased sharply; existing users' transactions increased in line with the

historical trend because the people discovered that it is more convenient for the transaction. Hence demonetisation has created a network effect among all insisting to digitalise their transaction. It also argues that digital revolution will continue even after some return to cash as supply normalises. Gaur, & Padiya (2017) also observed a huge surge in the usage of E-wallet and mobile payments immediately after the demonetisation. It also expects a positive result in the long run after the negative effect on the GDP growth for two financial quarters. The most favourable effect of demonetisation is that economy is taking step towards digitalization and cashless economy (Kawadia, & Gupta 2017) which has a very strong and significant impact on the cashless transactions in India (Balaji 2017). By adopting the cashless means certainly, there will be a check on black money (Rani 2016).

The measures initiated by government of India and RBI to push cashless transactions saw a rise in digital payments which was a positive upshot of demonetisation (RBI 2017a;b) . However, RBI seems to miss the point here by considering only the value and volume of digital transactions and not the share of digital transactions in total transactions which gives a different picture.

Deshpande (2017) observed that demonetisation offered customers the option of paying through the point of sale (PoS) machines or online merchandising and forced retail business to adopt electronic payments due to the shortage of cash. There was a 267 percent surge in the number of daily transactions through e-wallets in the month following demonetisation which was aided by the unavailability of cash, and the growth in such transactions levelled to a more moderate pace once currency became more readily available.

Overall digital transactions of all banks, six months after the demonetisation exercise, exhibited a decline. At the same time, the number of cash withdrawals from ATMs was overtaking transactions at point-of-sale terminals, while the average value of such withdrawals was also increasing (Jayakumar 2017).

Masiero (2017) is a study on the digital finance providers and informal street sellers in Bangalore, argue that digital tools seem to contribute only minimally to their integration in the new cashless system. Customers have a moderate level of satisfaction in e-banking services (Swaminathan 2016) while Varsha & Thulasiram (2016) indicated a high level of acceptance in a study based on consumer behaviour towards the acceptance of E-wallet services in Trichy and Thanjavur districts of Tamil Nadu.

Banaji (2017) stands for the need to recognise the disenfranchising nature of large-scale digitisation of nations and reiterates that enforced digitisation in India is being driven by three impulses viz. overwhelming wish to appear modern and on par with the West; deliver millions of poor Indians into the hands of financial institutions, banks and online marketers and citizen surveillance. This paper also argues for the need to recognise the dangerous rhetorics and propaganda that preface and accompany largescale digitisation of nations and economies. The world is moving towards with an automated payment

system that's compatible with international standards, but growing number security concerns are also hindering its popularity (Mridha, et al. 2017).

The effect of the demonetization policy in India was analysed by Prabhsimran Singha (2017) using the concept of sentiment analysis. The result of the analysis shows that a large share of Indians were happy with this policy. During the initial days, the sentiment was more towards the negative side as the common man had to suffer many hardships. Ultimately, as the new bank notes were made available, the overall sentiment of the people became positive. But this has theoretically clarified by Jayakumar (2017) in an attempt to explain the demonetisation exercise as a large-scale "behavioural experiment." This action seems to alter social behaviour by encouraging or even incentivising financial inclusion and a less cash-dependent economy because holding cash has behavioural aspects. But demonetisation failed to take into account the differential aspects of utility, i.e. decision utility and experienced utility. Supporters of this policy pointed out the absence of riots, the patience of the common Indian braving long queues as an expression of the support to the Prime Minister, which merely represent decision utilities and in no way reveal the true attitude of economic agents towards the demonetisation. The government attempted to use a positive empirical-scientific frame in this decision by calling for more prosperous, corruption-free economy and also moral frame by demonstrating "standing in queues" as one's patriotism. However, the immediate aftermath of demonetisation was associated with a significant negative frame and thus government failed to create tangible positive frames (through nudges) for attitudinal change.

Effective implantation might have undoubtedly resulted in significant progress towards the Digital India vision (Hassan Manazir 2017). The shifting process could be weakened by lack of ground level improvement such as advancement in the field of technology and infrastructure, access and awareness among people, digital literacy, etc. Security features of these e-payment systems also need to inspire trust, to continue the process (Economic survey 2017). Forcing poor people to adopt the cashless transactions rather than addressing the above-mentioned factors are not only unfair and undemocratic but also crashes the economy.

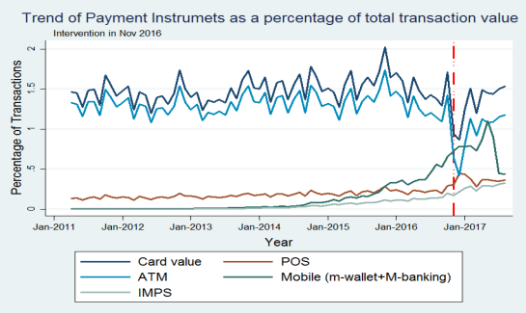
From the above review process, it is observed that most of the studies are focused on the general impact of demonetisation which lacks the deep understanding of the effect of demonetisation on digital payment system in India in the long run.

5. Analysis and Discussion

In this section, we examine the trend in growth of various payment instrument as a percentage of total transactions (in value terms). We also employ an intervention analysis to estimate the impact of demonetisation on the growth of these variables.

The Figure. 1 shows the trend of usage of various payment instruments in India. From the figure, it can be seen that there is growing popularity for mobile and POS transactions in

the recent years. From the figure, it can be observed that while usage of cards and ATMs fell in the immediate month of demonetisation, the digital payment instruments such as mobile payments, POS transactions and IMPS registered a significant growth. It is also observed that the trend is reversed in following months as cash found its way back to the system and the share of digital payments in total transactions started declining and cash again became the prefered payment medium.



Source: RBI Data Warehouse

Figure. 1: Trend of Payment Instruments (as a Share of Total Transaction Value)

Table 1: ARIMA Structure of Payment Instrument Variables

Sl. No	Variables	SARIMA Structure $(p,d,q) \times (p,d,q)^{12}$
1	ATM	(3,0,0) × (0,0,1)
2	POS	(2,1,3) × (0,1,1)
3	Card Value	(3,0,0) × (0,0,1)
4	Mobile Banking	(0,1,2) × (0,1,1)
5	IMPS	(3,2,3) × (1,2,1)

Source: Author's Estimation

NB: All the Variables as Percentage of Total Transaction

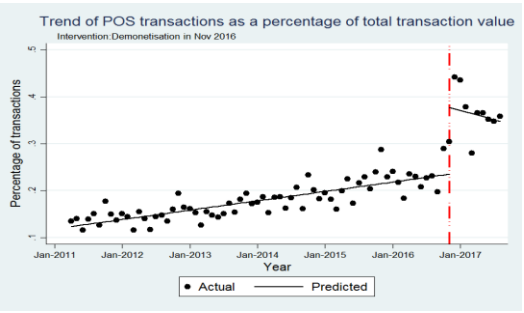
From the above Table 1, it can be observed that all the variables exhibit strong seasonality. It is also observed that POS and Mobile banking are integrated of order one, and IMPS is integrated of order two, while ATM and Card value are integrated of order zero.

Table 2: ITSA of POS (as a Percentage of the Total Transaction)

Parameters	Coefficient	P-value
β_1	0.001	0.00
β_2	0.143	0.00
β_3	-0.004	0.03
β_0	0.123	0.00
Treated: $\beta_1 + \beta_3$	-0.003	0.05

Source: Author's Estimation

If rising card value as a percentage of transactions is taken as a sign of digitalisation, it would have been a hasty conclusion. This is because the total value of card transactions is composed of total transactions at POS terminals and at ATMs. From the above (Table 2) analysis of POS transactions, we can observe that though the POS transactions increased immediately following demonetisation it has then decreased and the decrease post-demonetisation is sharper than the increase in POS transactions before demonetisation. Thus the results show that demonetisation has in fact reduced POS transactions as a percentage of transactions rather than improving it which is what is expected from a digitalisation drive.



Source: RBI Data Warehouse, and Author's Estimation

Figure. 2: Trend of POS Transaction (as a Percentage of the Total Transaction)

The Figure. 2 observes that though the POS transactions have increased throughout the period before demonetisation. Demonetisation increased POS transactions in the immediate month due to restricted cash.However, as cash found its way back to the system, POS transactions started to decline.

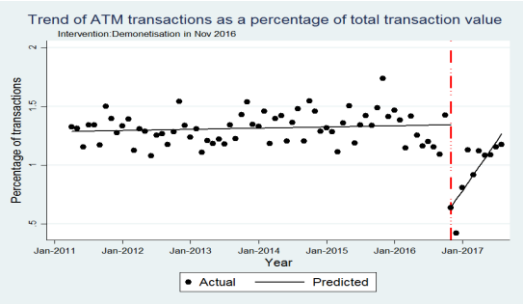
Table 3: ITSA of ATM Usage (as a Percentage of the Total Transactions)

Parameters	Coefficient	P-value
β_1	0.001	0.39
β_2	-0.699	0.00
β_3	0.068	0.00
β_0	1.286	0.00
Treated: $\beta_1+\beta_3$	0.069	0.00

Source: Author's Estimation

The total card value usage is also composed of usage at ATMs. A fall in the value of transactions at ATMs can be seen as an indicator for digitalisation while an increase in the value indicates a preference for cash over digital payments as ATMs are still predominantly used for withdrawing cash. From the Table 3, it can be observed that while there was as a significant decrease in ATM transactions in the immediate month, post-demonetisation the ATM transactions seems to increase by more than its growth preceding demonetisation. It must also be noted that the decrease in ATM transactions in the month of demonetisation was partly due to the withdrawing limits imposed, empty ATMs and large queues in front of ATMs. The results again point the fingers against digitalisation.

From the Figure. 3, it can be observed that before demonetisation the ATM transaction was increasing, while there was as a significant decrease in ATM transactions in the immediate month of demonetisation. As new currency got into the system and once ATMs were recalibrated, it started to increase again.



Source: RBI Data Warehouse, and Author's Estimation

Figure. 3: Trend of ATM Usage (as a Percentage of the Total Transaction)

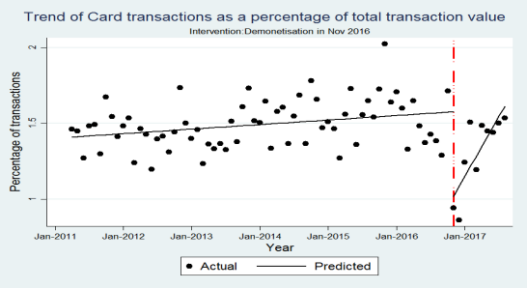
Table. 4: ITSA of Card Value (as a Percentage of the Total Transaction)

Parameters	Coefficient	P-value
β_1	0.002	0.024
β_2	-0.557	0.00
β_3	0.064	0.00
β_0	1.409	0.00
Treated: $\beta_1+\beta_3$	0.065	0.00

Source: Author's Estimation

From the above regression Table. 4, it can be can be seen that initial level of card value as a percentage of transactions is 3.82 and it appears to have increased every year by a negligible 0.005 % before demonetisation. Immediately following demonetisation card value as a percentage of transaction fell by 1.39 % which is mainly due to a fall in ATM transactions as observed earlier. However, after the demonetisation event, the card value as a percentage of transactions seems to pick up again and this growth is more than the growth in card transactions before demonetisation suggesting increased use of

cards post-demonetisation. This, however, shows people's preference for cash as cards are more commonly used for withdrawing cash than for use at POS terminals. The rising cash transactions might also be due to the uncertainty posed by the event and even the loss of trust in the currency.



Source: RBI Data Warehouse, and Author's Estimation

Figure 4: Trend of Card Value (as a Percentage of the Total Transactions)

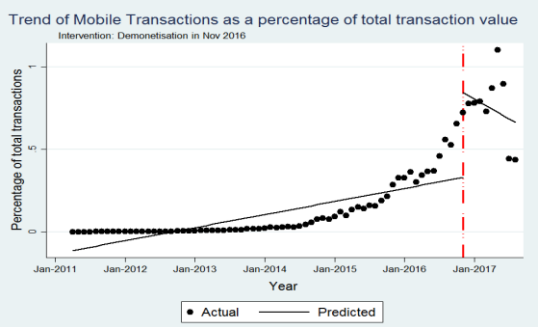
From the Figure. 4, it can be seen that initial level of card value as a percentage of transactions is increasing in every year before demonetisation. Immediately following demonetisation card value as a percentage of transaction registered a sharp decline. However, after the demonetisation event, the card value as a percentage of transactions seems to increase again and may converge or even overshoot the pre-demonetisation period.

Table 5: ITSA of Total Mobile Transactions (as a Percentage of the Total Transactions)

Parameters	Coefficient	P-value
β_1	0.006	0.00
β_2	0.514	0.00
β_3	-0.026	0.259
β_0	-0.12	0.00
Treated: $\beta_1+\beta_3$	-0.02	0.39

Source: Author's Estimation

Another indicator of digital transactions in the analysis is the value of mobile transactions as a percentage of total transactions. For the purpose of this analysis, the total value of mobile transactions is taken as the sum of the value of mobile wallets transactions and the value of mobile banking transactions. From the above regression Table 5, it can be observed that while there was a significant surge in the usage of mobile transactions in the intervention period, the usage of mobile transactions have declined in periods post-demonetisation. The decline though marginal and statistically insignificant is against what is expected of the digitalisation drive.



Source: RBI Data Warehouse, and Author's Estimation

Figure 5: Trend of Mobile Transactions (as a Percentage of the Total Transactions)

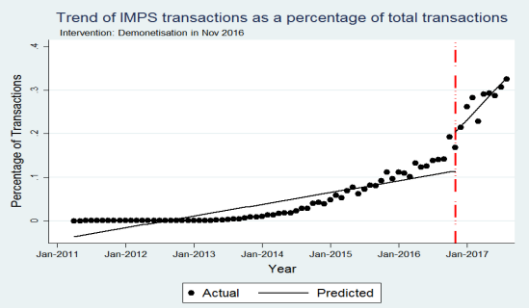
The Figure. 5 shows that Mobile transaction as a percentage of transactions was also rising though marginally. The immediate month of demonetisation witnessed a sharp increase in mobile transactions as well due to the shortage of currency. However, like other digital payments, mobile banking also witnessed decline with replenishment of currency in the system.

Table 6: ITSA of IMPS Transactions (as a Percentage of the Total Transactions)

Parameters	Coefficient	P-value
β_1	0.0022	0.00
β_2	0.089	0.00
β_3	0.011	0.00
β_0	-0.036	0.00
Treated: $\beta_1+\beta_3$	0.014	0.00

Source: Author's Estimation

The last indicator of digital transactions in this analysis is the value of IMPS transactions as a percentage of total transactions. From the Table. 6, it is observed that IMPS transactions registered a significant increase in the immediate month of demonetisation while the growth in transactions has slowed down since then. But the growth in IMPS transactions post-demonetisation has exceeded its growth in periods preceding demonetisation. However, this again cannot be seen as an evidence for growing digitalisation as envisaged by the government as IMPS transactions constitute only a meagre 0.08% of total transactions.



Source: RBI Data Warehouse, and Author's Estimation

Figure 6: Trend of IMPS transactions (as a percentage of the total transactions)

The Figure. 6 shows that IMPS transactions were more or less constant until 2014 when it started rising. The IMPS transactions as a percentage of transactions registered a significant rise in the immediate month of demonetisation. Unlike other digital payment, instruments IMPS transactions present a rising trend which is more in the post-demonetisation period compared to pre-demonetisation period.

6. Conclusion

The digitalisation drive which was pushed by the government after demonetisation has been subject to debate. The earlier studies point out that demonetisation will improve the digital transactions of the economy in the long run while many economists were apprehensive of pushing the economy for digitalisation without sufficient infrastructure. The present study finds out that while the usage of cards for transactions as a percentage of total transactions has increased, the share of the point of sale transactions (POS) and mobile transactions has registered a decline after demonetisation. The results also indicate a faster growth in share of ATM transactions as a percentage of total transactions while IMPS transactions as a percentage of total transactions have seen a marginal rise. The results of the study indicate more negative results of demonetisation on digitalisation than positive ones. This should be read together with the strong promotion of both government and RBI to move towards a cashless economy. The less digitalisation in percentage terms might be because of an economy that is 'unripe' to move towards cashless society due to infrastructure impediments and habit persistence.

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EMPLOYEE ENGAGEMENT IN THE DIGITAL ECONOMY: GAMIFICATION THE HR TREND

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Abstract

Use of technology is on the rise. The web economy has brought forth a shift in the working culture and environment of employees. The employees have an all-time access to numerous technological gadgets during working hours. A majority of what the current workforce does is interceded by digital technologies and social media. Accessibility to technology has brought forth novel techniques. Organisations have peeled off traditional processes and have turned their sights to simulating, engaging games in a non- game scenario to find out real life experiences. Gamification is an emerging concept that helps in improving employee engagement and employee experience. This paper tries to understand the concept of gamification, define what it is and how it helps managers to think about business practices in new and inventive ways to foster employee engagement in the digital era with special reference to SME's.

Keywords

Technology, Gamification, Employee Engagement, Digital Era, SME's

Introduction

Life is a game is an expression one commonly come across. Every individual has certain personal reminisces of the games they played in their young age. Games are most often played out for amusement, accomplishment or a prize. There are games which can be played by individuals all by themselves or as part of a team. With the advancement in technology virtual games have become the latest fad. "A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome." (Salen & Zimmerman 2003). Technological has progressed like wildfire in the corporate world .With the millennial workforce forming a majority of the human asset in an organisation, there has been a gradual switch over to a technology infused management processes and systems. These modern technology savvy workforce have a constant access to customised digital tools and resources. Integrating modern innovative strategies are important to engage these workforce. Using games to achieve organisational goals have gained popularity in the web economy. Gamification of management processes and systems is a novel innovation in the corporate world of today.

Employee engagement is the expectant, optimistic feeling that employees have towards

their jobs and also the drive and effort they put into it. It's a concept which needs to be studied frequently with respect to career aspects of individuals. The concept of employee engagement is not looked into in small and medium enterprises. SME's are businesses whose personnel numbers fall below certain limits and includes segments of enterprises and organisations which come in between the "the small office-home office" size and large organisations. But this segments provide the largest employment opportunities and generates impacts on the GDP of a country. So it's highly imperative to judge the employee engagement levels of the people employed in these segments. Employee engagement initiatives do not require huge resources. It is more about the reality of how things are done, how people are managed, and whether they feel listened to and rewarded in a fair way. This paves way for enabling latest fads and novel technological advancements in figuring the engagement levels as it is a round the clock metrics.

Objectives

- To understand and define the concept of gamification
- To understand how gamification helps managers to think about business practices in new and inventive ways to foster employee engagement in the digital era with special reference to SME's.

Methods

A major source of information was literature survey. The literature survey was carried out in depth. Information related to employee engagement were collected from books and journals. Information on gamification and SME's were collected from various reports published and through a discussion with government bodies and industry personnel's. Opinions of Human Resource consultants were taken into consideration to understand the practical aspects of gamification.

Discussion

Gamification first appeared in the web in the context of computer software in the year 2008. But started to gain popularity only in the year 2010. Gamification is the application of game-design elements and game principles in non-game contexts. Use of games to generate awareness of business goals and aspirations is a novel concept. It refers to fusion of social/reward aspects of games into software. "Gamification" is an informal umbrella term for the use of game elements in non-gaming systems to improve user experience (UX) and user engagement (Deterding, 2011). It comprises the practise of using game plan techniques and game mechanics in a non-game context. Game procedure are rules and dynamics of the game intended to make the play/work enjoyable. Game design is the process of using game mechanics to create a setting that allow people playing a game to have a gratifying, exhilarating and engaging experience. The other part of it involves making work increasingly cool and amusing. The "game" side gets employees enthused, while the analytics side of it gives a deeper understanding into productivity. This is useful for organisational superiors and the employees. These games give an impersonal fact about one's own output and competence. As stated by (Lieberoth, 2014) gamification

practices leverage people's normal desires for entertaining, knowledge, expertise, competition, accomplishment, prestige, individualism, selflessness, or simply men's reaction to the framing of a state of affairs as game or performance .

SME's are comparatively small sized enterprises where employees are assigned number of tasks and role to be enacted till the completion. The number of employees working in these enterprises is small in number, due to inherent small size, less investment involved etc. The entire onus of tasks and roles fall upon the existing employees .Employees usually function keenly in their initial year's .But as years roll off in their work life, affiliation towards their work changes. People get distracted with their same old routine work tasks. Work tends to get repetitive, motivation level starts spiralling down. This is where gamification can be introduced by managers of SME's. The employees can be given games that offer prizes, points or status as and when an improvement in skills, goals or objectives of the organisation is meet. .Gamification ensures a real life experience through video like simulation. Gamification is notable at engaging and boosting up employees. They learn new skills, activities, and inventive ways of solving problems. Games designed use constant positive feedback to increase engagement. It simplies intricate tasks into simple tasks that the brain can learn over time without additional stress. This would boost the morale and engagement of employees and the small –medium enterprises can reap benefits from putting skills and knowledge of their employees though small in number to good use.

Conclusion

No matter how small or large an organisation, if employees feel connected to their job, to their team or to the business, they will go the extra mile and excel at what they do which in turn means that the business will perform better. Gamification is a tool which can be very effectively used by enterprises of any magnitude to effectively engage their small or large number of workforce .The game based tools would help integrate current business processes to drive positive employee and productivity outcomes.

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TECHNOLOGICAL PROTECTION MEASURES AND CHALLENGES TO DIGITAL ECONOMY

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Digitization is conceivably the most momentous of recent technological developments. Digitization refers to the ability to document works in a binary format in which they are stored and transmitted. Digitization had an impact not only on the format of works but also on their use and distribution.[1] The conversion from analogue to digital not only revolutionized the ways in which works can be created but also the ways in which works can be used.[2] Works created in the digital format had many special characteristics when compared to those in the analogue form, the most important being better quality. However, the proliferation of reproduction and dissemination of works over the internet has led to a catena of issues thus proving to be a bane for copyright owners. This paper discusses in detail the negative impact of using TPMs on access to works in various fields of the society and whether the use of TPMs by copyright owners is detrimental to the digital economy.

Technological protection measures

The more the works started to be created in this format, the more became their unauthorised use.[3] Certain recent advances in technology on the likes of digital copying, compression technologies such as MPEG-2 for video and MP-3 for audio, increased bandwidth and easy networking have indeed made the processes of creating, using and distributing of unauthorized works easy, again proving to be troublesome for the copyright owners. The growth of digital technology, especially the means of disseminating protected material has led to the copyright owners developing technological protection measures[4] which are aimed at protecting their material against unauthorised use. In general terms, TPMs are software, components and other devices that copyright owners use to protect copyright material.[5] Examples of TPMs include encryption of software, passwords, and access codes. TPMs are of two types: Access control measures, such as encryption and copy control measures, such as Serial Copyright Management System. Access control measures may be used to prevent any person from accessing the work in any sense, without the copyright owner's permission. Under copy control measures, access may be permitted, but copying is prevented. The advent of internet facilitates the manufacture and trafficking of circumvention devices, and the subsequent dissemination of copies of works whose technological protection measures have been circumvented, at a global level, poses challenges for the effective protection of copyright owners'

interests. Thus being the case of copyright owners, how the use of TPMs by copyright owners in their works hampers access to information to the society thereby causing detriment to the well being of the society is to be given serious thought.

Challenges Posed by Technological Protection Measures in Copyright Regime

Though digital technology acts as the favorable platform for dissemination of copyrighted works, it also provides the same ground for circumvention of the TPMs deployed by the creators of such works. The TPMs employed by authors or owners of works were not welcomed by consumers of goods and services in the digital market[6], which led to circumvention of TPMs. The reasons why the use of TPMs as cumbersome for the consumers were restricted uses; problem of interoperability; issues of privacy; lockouts; and market orientation.[7] Anybody who has expertise in computer technology may have the capacity to circumvent such technologies. If TPMs may be considered as the lock provided by the copyright holders for the protection of their works, circumvention refers to the act of unlocking the lock by third parties without the authorisation of the copyright holder. Thus circumvention has become a bane for copyright owners.

The dilemma faced in the copyright regime, *inter alia*, caused due to such circumvention activities has led to the promulgation of copyright legislative initiatives, both at the international and national levels. The Internet treaties concluded by the World Intellectual Property Office in 1996 addresses the issue of circumvention of TPMs. Article 11 of WIPO Copyright Treaty provides that "contracting parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective TPMs that are used by authors in connection with the exercise of their rights under this treaty or Berne Convention and that restrict acts, in respect of their works, which are not authorised by the authors concerned or permitted by law".[8] Section 65-A[9] of the Copyright Act, 1957, amended in 2012, provides for the protection of TPMs used by copyright owners to protect their rights on their works. The Indian law also provides for some viable exceptions for the use of TPMs for certain activities such as for doing anything necessary for conducting encryption research, for conducting lawful investigation, in the interest of national security etc.[10] These exceptions are provided keeping in view of the fact that circumvention of TPMs may be done for legitimate purposes as well. If no such exceptions are provided in the law, there is a chance of innocent persons indulging in legitimate activities to be found violating the law. In some countries, preparatory activities for circumvention, such as the act of manufacturing or trafficking of devices intended for the purpose of circumvention are treated as being on the wrong side of law.[11]

TPMs and their challenges to the digital economy

The use of TPMs being a prevalent practice among the copyright owners, whether it will have a negative repercussion on the digital economy is interesting to observe. From the perspective of policy, it is

important to recognize that the prohibition of circumvention devices could also discourage capital flow to innovative technology, thereby impeding one of copyright law's primary goals, which is to secure and encourage innovation.[12] Further, a prohibition of the manufacturing of circumvention devices could have devastating implications for research and development and for national security.[13] Prohibiting the making of such devices is sure to stifle research in the field of cryptography and other sciences that promote innovation and it will also stifle the research of various security applications.[14] Contraction of the public domain, a general reduction of access to digital goods and harm to competition[15] are some of the pivotal negative impacts that TPMs may cause to the digital economy, which are discussed in detail below.

i. Contraction of Public Domain

Generally the works which are considered to be in public domain are those for which there is no protection by intellectual property laws. For instance, such works may include those whose term of protection has expired or some works which are not eligible for protection since they are considered as the building blocks of creativity such as ideas, themes, plots etc. Though this is considered to be the most negative connotation of the concept of public domain, it has come to be the most accepted of all connotations of public domain. However, certain commentators consider that a copyrighted work is in the public domain to the extent that it may be used freely by others, without any need to obtain authorization from the copyright owner. For the purposes of this paper, the author also uses the same interpretation of public domain. According to this interpretation, though a work is copyrighted, there is no need to take authorization from her for the uses of the same.

The availability of TPMs, augmented by the prohibition on circumventing (or supplying means of circumventing) such controls, enables publishers to remove these uses from the public domain.[16] As regards the idea-expression dichotomy in copyright law, which implies that ideas, facts etc. are not copyrightable and only expressions of ideas are copyrightable, since they are the building blocks of creativity upon which other works are created, use of TPMs in works may have the effect of blocking ideas, facts, themes etc. from the realm of public domain. This also adversely contributes to shrinking of public domain.

Expiry of the term of copyright also contributes a work to the public domain. The minimum term of copyright mandated by the TRIPS Agreement is life of the author plus fifty years. However, the member countries have expanded the term of copyright depending on their socio-economic policies. However, generally, TPMs may be considered as perpetual, since no country stipulates minimum term for TPMs. Thus deployment of TPMs in this sense, also contribute to making the duration of copyrighted works perpetual.

ii. Decreased Access to Digital Goods

Another effect of the availability of TPMs to reinforce copyright protection is the potential elimination of secondary market for

information goods, with a consequent reduction of access to those goods.[17] Tethering technologies is the primary source of this effect.[18]

One factor that will significantly affect how widely technical protection systems will be deployed and how tightly they will restrict uses of copyrighted works is how consumers will react to them. "The more liberal you make the terms under which customers can have access to your product, the more valuable it is to them. A product that can be shared with friends, loaned out and rented, repeatedly accessed, or sold in a resale market is obviously more valuable to a potential user than one that can be accessed only once, under controlled conditions, by only a single party."[19]

iii. Harm to Competition

As discussed earlier, the primary purpose of deploying TPMs is to protect the unauthorised use of works. However, not all technological measures are designed to prevent piracy.[20] Companies also use technological measures to prevent competition.[21] TPMs impose costs on society to the extent that they contribute to eliminate secondary market for information goods, with a consequent reduction to access to those goods. When combined with legal sanctions, TPMs make it possible to control access to and distribution of content to an unprecedented degree.[22] Using TPMs, distributors of digital works may not only preserve existing markets for their works, but they may also create new market. Thus, even the content that has fallen in the public domain and should thus be freely available may be wrapped up in TPMs with minor changes making them a subject-matter of copyright.[23]

Competition among information providers may also affect the successful deployment of technical protection systems.[24] If one information provider tightly locks up his content, a competing provider may see a business opportunity in supplying a less tightly restricted copy to customers who might otherwise buy from the first provider.[25] A competitive alternative to tight technical controls may well be to adopt a strategy to show how content providers can take advantage of the opportunities presented by digital technologies, rather than being overwhelmed by the risks.[26]

Conclusion

It is now generally agreed upon that the objective of copyright law is to strike the correct balance between facilitating access to copyrighted works and providing incentives to the creator.[27] From the above analysis of the use of TPMs by copyright owners for the protection of their works, it may be concluded that though from the point of view of copyright regime, the deployment of TPMs is justified so as to incentivise the creator, however, whether the use of TPMs is in fact aimed at blocking the access to those works to the consumers is to be given serious thought. It is also not to be ignored that the purpose of creating works by copyright owners may be fully realised only if those works reach the potential consumers to the extent that they want. Whether TPMs stand fully to justify the true intent of copyright law is highly doubtful. As is the usual practice of copyright owners to make use of TPMs for protecting their works from

consumers, it is seen that such practice actually has the impact of adversely affecting the digital economy. The reasons cited above such as shrinking of public domain, reduced access to goods and harm to competition may very well be attributed to negatively affecting the digital economy.

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[6] *Supra* n. 3.

[7] *Id*.

[8] Article 11 of WIPO Performances and Phonograms Treaty also contains a similar provision.

[9] Section 65-A(1) of the Copyright Act, 1957, as amended in 2012, provides that "any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine".

[10] See Section 65-A(1) of the Copyright Act, 1957.

[11] See Section 1201, US Digital Millennium Copyright Act.

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DIGITALISATION AND CHALLENGES TO INSURANCE SECTOR IN INDIA

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Abstract

The technology explosion has revolutionised the fintech industry and made it undergone massive changes, chief among them being the move towards a cashless economy there by promotion of cashless technologies digital wallets, Internet banking, the mobile-driven point of sale (POS) and others like p2p lending platform, web aggregators, p2p insurance etc in financial sector, disrupting the long-held monopoly of traditional institutions like banks. The paper explores the challenges faced by the Insurance sector because of Internet of things. This paper proposes to examine concerns in the Indian healthcare sector and the resultant effect on privacy with the organic inclusion of software as it becomes medical devices and the subsequent usage and applicability by Insurance companies of such data and challenges posed.

Internet of Things – An Unparalleled Revolution

Internet has revolutionised all walks of life. But beyond that internet of things has drastically changed day today life. Making the life more easier with the technological advent

Some of the examples are Smart watches, fitness trackers, action cams, smart clothes, and most of the items we consider as wearables are all objects that can send the data they're recording about your daily life up to the cloud for processing. On the other hand, there are also wearables, like smart glasses, that are looking to push all sorts of relevant online information back down the other way. Wearables may have started off as fairly dumb pedometers but with so many sensors on board now and almost all of them Wi-Fi-enabled, wearables have become IoT objects in their own right. Smart watches (and even fitness trackers such as the Misfit Flash) can be set up to control your Nest thermostat, as well as Spotify playlists, smart locks, and smart light bulbs, right from your wrist. [1]

The IOT includes the connections of physical objects to the Internet and among themselves through embedded sensors, utilizing both wired and wireless technologies, creating an ecosystem of ubiquitous computing. Generally, however, the "IOT" does not include such personal devices as computers, smartphones, tablets and other closely related devices, although these types of devices are often used to manage or communicate with sensors or devices included Is IOT a Threat to Consumer

Consent? 3 in the definition of "Things" (Federal Trade Commission Staff, 2015). [2]

IOT and Insurance

Motor Insurance:

One of the most prominent and discussed examples of the "Internet of Things" are connected (or smart and later autonomous) cars. Another particular group of stakeholders are insurance companies who are interested both in data about the behavior of drivers for offering more risk-adjusted insurance schemes to the car owners and general data about driving safety for helping car drivers to reduce the risks of accidents.[3] In the connected car a huge number of data, esp. through sensors, is produced, which allows many additional services for the car driver, as, e.g., Advanced Driver Assistance Systems. These are data about the technical functions of the car itself, the driving behavior, location data, data about the surroundings of the car (as other cars and traffic), data about weather and road conditions etc.[4] The connected car is via mobile communication constantly connected to the internet and can exchange data in real time. These characteristics allow, on the one hand, for an increasing degree of automated driving (up to the possibility of self-driving cars) with the potential benefits of unburdening the drivers and of increasing safety through less accidents by human errors, and, on the other hand, for offering the car drivers (and car passengers) a wide range of additional services during driving, e.g. in regard to navigation, finding parking space, infotainment, online shopping etc., and also might allow public authorities to improve traffic regulation and reduce congestion and environmental problems. Both the EU and some member states, as, e.g. Germany, have started to design and implement policies for enabling connected driving as part of comprehensive mobility concepts, often in close collaboration with the most important stakeholders, as, particularly the car industry.[5] The most important regulatory problems refer to interoperability and standardization in regard to technical

The most commonly referred example of IoT applications is motor vehicles. Sensors placed on vehicles allow their users to remotely locate and control the status of the car, or to set off alerts in the event of an accident, also providing its exact location and making it easier and faster for any necessary assistance to arrive, thus reducing the damage incurred. Call centers located in other countries can remotely programme a service for the car or can facilitate simple – for the time being – repairs which occur electronically from the distance. Risk occurrence, risk aversion and damage control demand to be looked at under a new lens.

Sensors placed on vehicles allow their users to remotely locate and control the status of the car, or to set off alerts in the event of an accident, also providing its exact location and making it easier and faster for any necessary assistance to arrive, thus reducing the damage incurred. Risk occurrence, risk aversion and damage control demand to be redefined in this changing context. In the context of self driven car whom should be held responsible? Will a more comprehensive revision of the

civil law liability system have to take place? The more challenging is to fix the liability when it commences and ends when automatic car can be controlled from remote places and can be repaired any negligence will be fixed upon whom? Assessment of the risk, its price and underwritten are the questions to be addressed. In case of life and health insurances the questions arise are whether data availed by IOT wearable-technology-smart-watch directly reports to health insurer, can be used to deny health insurance? Will insurance products be personalized? If would I get a personified premium structure?

Health Insurance- For instance, employers improve productivity by monitoring employee health and subsequently saving on insurance premiums. Healthcare insurance companies, by using this same information, may gain a better understanding of risk profiles of their clients. In general, the Bystander Beneficiary is characterized by the utilization of the information provided by the IOT device, and is not invested in the information creation or delivery process, nor involved in the business of manufacturing, selling, or supporting the IOT device.[6]

Similar patterns of the use of telematics can be found from smart homes to industrial buildings, while digitalised operations are vastly applied in industrial sectors, where IoT applications are increasingly responsible for large parts of the production, construction and carriage processes in sea, land and air.

On the other hand, applications extend to life and health insurances and other kinds of questions arise. Will insurance products be personalized? If my wearable-technology-smart-watch directly reports to my health insurer, would I get a personified premium structure? The reporting in this case is realized entirely via IoT: electronic signals are sent to a computer and the signals are transformed into profiling via big data analysis. Inevitably, insurers will have to face privacy and data protection issues more acute than those they are facing today.

The current IoT ecosystem suffers from flaws that include vulnerability to cyber attack, technical system failures, and the problem of free riders who depend upon security and other safeguards in the network to compensate for their own insecure devices, protocols, and software. Cyber attacks and failures undermine confidence in the IoT and serve as a reminder that regardless of how much IoT security is improved, there will always be vulnerabilities and exploits. Networked failures can have significant socioeconomic consequences.[7]

Challenges and Issues to be addressed by Insurance Sector

The main challenges are the way in which risk factor is going to be defined because of the effect of the Internet of things is going to be the main issue effect on risk factors and how it is going to affect client and insurer and the concerns of privacy of data. Secondly the need to redefine the civil liability regime and causation. Also how the IOT changes are going to affect existing regulation in insurance sector.

Digitalisation and Challenges in p2p lending in Insurance Sector

The P2P lending lies needs to be regulated because of "the impact it can have on traditional banking channels" and NBFCs

ie., Non banking financial companies and its "potential to disrupt the financial sector and throw up surprises" as held by Reserve bank of India. The dearth of verifiable data of the borrowers as well as the process of borrower's credit assessment and background verification is difficult and unreliable. This situation may not attract many online lenders. But the unregulated, the P2P lending industry could potentially fester scams and there other unlawful activities that could have disastrous consequences. This can utilised as a platform for money laundering associated with peer-to-peer lending. The dismal situation is accentuated by unfretted lack of regulations and chances for misuse. India should be one of the disruptive models in online lending. If properly regulated, the P2P lending platforms can do this more effectively.There is a need of set of criteria for promoters, directors, and the CEO of P2P lending companies. Preference would be give to individuals with a financial sector background.

The Reserve bank of India regulatory guidelines, 2017 for p2p lending and its effectiveness in facilitating such online platforms with much protection of the interest of borrowers well as that of investors is discussed below.[8] The issues examined are the following mainly:[9]

1) The issues of fixing cap on the interest rates charged by P2P lending companies at the same level as NBFCs and microfinance institutions (MFIs), whether it affect positively for online money lending Industry
2) The concerns regarding the lack of transparency in KYC and loan recovery practices. Since the transactions are all carried out through bank accounts, all KYC-related activities should be conducted by the concerned banks
3) Whether putting a cap on the total investment of a lender will restrict the growth of this sector by preventing HNIs from participating.
4) If, P2P lending platforms are not allowed to give any kind of credit guarantee, which could restrict P2P players from creating innovative products like principal protection to safeguard investor's money.
5) Also requirement of clarity on how the execution of agreements between borrowers and lenders will take place the cap on the investment of a single lender to the same borrower is another area that could impede the sector's growth.

Conclusion

Many deliberations had been going on recognising that InsurTech and digitalisation. The major outcome of the European jurisdiction is the need to come up with new business model combining Insurance and technology digital services and social network partners, in order to address risk in the IoT era.

Big Data as a result of IOT enables the development of more personalised products and services and improves the accuracy of risks assessments. These may be advantageous for few consumers, but consumers with higher risk profiles could also face exclusion issues. As the products may discriminate one customer to another and this may lead to

ethical and fairness questions may arise regarding the use of certain types of personal information.

It seems that Europe's regulatory framework will have to balance support for innovation with the maintenance of consumer protection standards, while traditional products will still have to be available for people who are not technology literate. The different categories could be considered as different target markets and may require different design and product governance models for the insurance products addressed to each category of clients.

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DIGITAL FINANCIAL INCLUSION IN INDIA - OPPORTUNITIES AND CHALLENGES.

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Abstract

In the recent decades, the concept of financial inclusion has become the top most agenda among the policy makers across the world. In ordered to Achieve sustainable growth, policies must be inclusive and this is possible only through financial inclusion. Financial inclusion is a process of ensuring access to an affordable and adequate financial services to all sections of the society through formal institutions. It has gained its importance all over the world as a result of a finding that states the direct correlation between poverty and financial exclusion. In India it was introduced in the year of 2005 by Y V Reddy and later it was added to 11th 5 year plan. It is a gradual process and requires a large amount of effort to achieve to its full extend.

As digital economy is growing rapidly facilitating innovation, competence and sustainable growth, advancement and adoption of digital technologies , innovative processes and business models can therefore boost the process of financial inclusion. The paper analyses the opportunities and challenges that India faces in the process of digital financial inclusion using the secondary sources. Digital financial inclusion is the process of ensuring access to financial products and services by all section of society through the digital media. It connects the excluded to the financial system thereby stimulating the economic activity. Digital financial services provide a medium to store value at ease. It provides choice to users to choose among the financial product and services that suits their needs at ease and at their convenience. The initiative of prime minister as digital India has put the base for the digital financial inclusion in India.

Digital financial inclusion not only provides opportunities to the users but also raises challenges. Such major challenges are privacy and security risks, digital divide, problem of agent networking etc. Thus these challenges must be critically analysed by policy makers and must come up with measures to overcome these challenges in order to smoothen the process of financial inclusion through digital media.

Keywords

Financial inclusion, Digital media, Choice, Shadow economy, Ecommerce, GDP, Women empowerment, Cyber Security risk, Agent network.

Introduction

The concept of financial inclusion has gained the top most priority among the policy makers across the world In the recent decades. In ordered to achieve sustainable growth, policies must be inclusive and this is possible

only through financial inclusion. Financial inclusion is a process of ensuring access to affordable and adequate financial services to all sections of the society through formal institutions. It has gained its importance all over the world as a result of a finding that states the direct correlation between poverty and financial exclusion. In India it was introduced in the year of 2005 by Y V Reddy and later it was added to 11th 5 year plan. It is a gradual process and requires a large amount of effort to achieve to its full extend.

As digital economy is growing rapidly facilitating innovation, competitants and sustainable growth, advancement and adoption of digital technologies, innovative processes and business models can therefore boost the process of financial inclusion. The paper analyses the opportunities and challenges that India faces in the process of digital financial inclusion using the secondary sources. Digital financial inclusion is the process of ensuring digital access to and use of formal financial products and services by all section of society especially the excluded and the underserved population. It connects the excluded to the financial system thereby giving a fillip to economic activities. Digital financial services provides a medium to store value and provides choice to users to choose among the financial product and services that suits their needs at ease and at their convenience .

Digital financial inclusion not only provides opportunities to the users but also raises challenges. Such major challenges are privacy and security risks, digital divide, problem of agent networking etc. Thus these challenges must be critically analyzed by policy makers and must come up with measures to overcome these challenges in order to smoothen the process of financial inclusion through digital media. The paper is divided into two sections, the first section gives a glance about digital financial inclusion and initiatives taken around the globe and India in particular. Section 2 details the opportunities and challenges faced in the process of digital financial inclusion in India.

Digital financial inclusion is the process of ensuring digital access to and use of formal financial products and services by all section of society especially the excluded and the under served population. Digital financial services includes payments and remittance, savings, credit and insurance through digital channels like internet, mobile phones (both smartphones and digital feature phones), ATMs, POS terminals, NFC-enabled devices, chips, electronically enabled cards, biometric devices, tablets, phablets and any other digital system. The key enablers of digital financial services are financial institutions (such as a bank or micro finance institutions), mobile network operators and Agents or the payment aggregators (such as an agent or a payment banks) who make digital transactions through ATMs, POS, internet banking and mobile banking.

Around the world, several examples are there to be quoted for digital financial initiatives. Among them models of Kenya and Tanzania are prominent. It provides promising models for digital means of banking and payment for other developing nations. These include M-pesa in kenya helping households strengthen their informal

risk-sharing networks, enabling them to better respond to shocks by borrowing or receiving gifts from dear ones. M-Shwari in Kenya, a product offered by Commercial Bank of Africa to M -PESA users which reached more than 2.5 million customers within two years, offering small unsecured loans averaging USD$15 each for liquidity management, with an overall portfolio default rate of 3.5. In China, where the regulator has permitted significant innovation outside the banking system have paved way for Significant number of developments to be taken place in the financial services especially in payment and investments by a huge number of marketplace lenders and a number of tech companies.

India had seen tremendous progress in digital financial inclusion. Rangarajan committee (2008) was the first to stress the need to extend the reach and the scale of banking by leveraging technology to open new channels beyond the traditional banking channels. it opined that adopting appropriate technology would enable branches to reach out the customers. And suggested funding support for promotional and developmental initiatives, through a Financial inclusion technology fund that would facilitate better credit absorption and application of technology. The Digital India initiative by Prime Minister Narendra Modi has put the base for the digital financial transformation. Another major step in this regard was the Pradhan Mandri Jandhan Yojana and Adhar card enrollment. Till date there are around 3.93 crore Jan Dhan accounts and 120 crores Adhar card numbers. Other initiatives includes *99#, Unified payment interface (UPI), BHIMA, IIMPS and other etc. Establishment of National Payment Cooperation of India is also one such step forward in this regard. RBI's regulatory guidelines on mobile banking in 2008 which was the first in such a nature, permitted banks to transfer funds from one bank account to another through the mobile platform (shivalik chandan2017). Demonetization (which removed 86% of cash in circulation) has also paved the way in India to shift to the digital platform such as a mobile wallet (PayTM, Mobiquick etc), inter bank fund transfers etc.

Opportunities of Digital Financial Inclusion in India

The process of Digital financial inclusion brings in promising opportunities, which fosters the growth of Indian economy. It enhances economic growth and stability by means of capital accumulation and economic participation. Digital financial services helps Indian economy to address the key market failures such as information asymmetry, behavioral biases, high transaction costs, incomplete property rights and imperfect competition which otherwise inhibited the delivery of traditional financial services and thereby raising the poor out of vicious circle of poverty. For instance, women, who lack property right which leads to inability to independently access financial services which can be bypassed through a good digital product design and thereby, improving their control and decision makes power in the family (Dean Karlan, Jake Kendall, Rebecca Mann, Rohini Pande, Tavneet Suri Jonathan Zinman 2016). Developing a digital transaction history helps to avoid the the problem of information asymmetry and

digital tracking of transactional Data can help in understanding the behavior patterns of the users and tailor financial product and services accordingly.

Digital financial services takes financial inclusion to a greater pace by i.e it provide a medium to include the low income and the disadvantaged, which in turn, lead to the sustainable growth of the country. It may enable around 344 million to gain access to financial services for the first time. The digital money, the wide and rapid expansion of internet access, and mobile phones adoption/penetration, in indie have created the perfect conditions that enables excluded and the unserved population to access financial products and services for the first time at an easier, secure and affordable manner. Digital financial services henceforth DFS such as digital payment opens up a window for poverty alleviation by enabling low income consumers to store and save their money more safely and securely, reducing the time and cost to make and recieve remittances and to make cash transactions, effective handling of emergencies, developing a digital transaction history that can be used to provide access to additional financial services such as credit, and enabling them to actively participate in the growing online and digital economy thereby reaping the benefits of economic growth. It, thus profiles the low income and disadvantaged groups into a generators of financial assets and a potential contributors to the economic growth.

Extensive use of DFS can bring about substantial growth in annual GDP of an emerging economy like India. "Nearly two-thirds of the GDP increase will come from enhanced productivity of businesses and governments as a result of digital payments and One-third is from the additional investment that broader financial inclusion of people and micro, small, and medium-sized businesses would bring. The small remainder comes from time savings by individuals, which enables additional hours to be spent on work,"(McKinsey2016).

DFI initiatives paves ways for the government of India to enhance transparency, realize the actual tax revenue and reduce leakage of public expenditures, avoid tax evasion, reduce the size of informal or shadow economy etc. Jam Trinity - JanDhan accounts, Adhar numbers and mobile penetration, (S Ananth, C Charan singh 2016) would provide the government an opportunity to convert mobile phones into an powerful and secure platform to conduct various activities such as dispersement of public funds for public works, to serve various subsidies (LPG, food, fertilizer etc), at the people's convenience. As per the World Bank report, By Digitizing cash-based subsidies alone India could save approximately one percent of its GDP annually , which was put in practice through direct benefit transfers (DBT) of subsidies using Jandhan accounts of 30.93 crores with a deposit of73258.49 crores -jan2018), and 120 crores Adhar numbers (2017). India witnessed a reduction of program fund expenditure and corruption by 38% and 25% respectively through the usage of DFS for transfer of program funds for public works. As digital payments records transactions and leaves digital traces that throw light on to the financial lives of individuals and businesses thereby, enhancing transparency and generating tax revenues .

Another opportunity of digital finance is its the potential to reduce the size of the India's informal or shadow economy and improve adherence to tax laws. With regards to the informal economy, there is a direct correlation between the use of cash in an economy and the size of its shadow economy. Economies featuring a high rate of cash transactions build up an suitable environment for large and complex informal economies. Incentives for using cash for transactions by both the parties such as a vendor, who can maximize revenue by evading tax ,by charging cash and offer goods and services at a lower price to increase market share. And on the other hand, a purchaser can enjoy a lower price by not paying value added taxes which gets translated into cost advantages which accounts about 25 percent in India's apparel industry, promotes shadow economy. An average increase in digital payments of ten percent per year could shrink the shadow economy by five percent, as it capture transactions through digital records into the formal economy and report income that generates tax revenue for the government (alim Maherali). Thus, India could gain around 110 billion by reducing leakage in expenditure and realization of tax revenue (McKinsey2016).

DFS such as digital payments raises the productivity of financial and non financial businesses, government and individuals which in turn lead to creation of handful of job opportunities of nearly 21 million in all sectors of India (McKinsey2016). It has significant potential to support Financial Institutions (banks and MFIs, non-Financial firms (mobile network operators-MNOs) and third party providers (agents and payment aggregators) to expand the delivery of basic financial services at an affordable, secure and convenient manner to people at a large particularly poor and disadvantaged through digital channels like internet banking, mobile-phone-enabled solutions, electronic money models, and digital payment platforms. Digital financial inclusion (DFI)initiatives supports financial institution (Banks and MFIs) for business expansion by making their aspiration of financial inclusion a reality in a more affordable and efficient manner. DFS helps them to tailor financial products and services (using the digital transactional services, data trail which reflects an individual's cash flows, credit risk assessments etc) that will cater the needs of the existing and new customers. Thus, reducing the leakages, caused due to the presence of informal financial institutions. For instance user friendly digital payment can increase repayment rate (Michiel Wolvers, Daniel Waldron2017). It increases financial institution's operational efficiency and financial performance, perk up productivity, competitiveness and risk management and enhances financial position and profitability by assisting in market penetration and customer empowerment. As per McKinsey report, in India DFS could reduce 80% to 90% of cost of offering services to customers and bring $799 billion by expanding balance sheets of the financial service providers .

DFS has played an important role in promoting E-commerce in India. E-commerce in India started at a rather low pace due to the backward infrastructure, straddling telecommunication, mobile internet and unsuitable logistics arrangements especially in rural areas. The low usage of digital payments was another obstacle for e-

commerce market development in India as it had always been a cash dominant economy, with cash payments constituting more than 95% of all transactions. But the recent Government Policies that Pushed the Public towards Electronic Payments such as e-wallets, banking cards, USSD and micro-ATMs, wide spread penetration of internet usage especially arrival of 4G services, (462 million, 36.6%-2016) and mobile phone in special, the smart phone penetration (650 million mobile phones out of which 300 million smart phones-2016) changed the retail landscape drastically. According to Goldman Sachs, India's Ecommerce market will account for 2.5% of India's GDP by 2030 and expected to touch $300 billion. The rapid growth of multiple payment options together with Mobile internet and smart phone market in India will certainly be a boost for e-commerce platforms which includes domestic players like Flipkart and Snapdeal and international players like Amazon and Alibaba.

According to the Reserve Bank of India, the transaction volume of electronic payments increased 43% in the month after demonetization, and a similar level of transaction volume has been maintained since. It is said that remarkable and persistent increase in the use of digital payment platforms will surely benefit e-commerce players in the country. India's national mobile payment platform, the Unified Payments Interface (UPI) helped to spawn scores of state-run digital payment channels (such as BHIM (Bharat Interface for Money) and Bharat QR code for scanning and paying) and private digital payment channels (such as AirTel money, PayTm and MobiQuick) across the country. The monthly transaction volume through UPI in July 2017 was 56 times that of November 2016. It is expected that electronic payments usage will continue to grow in India due to the digital financial inclusion initiatives, which would help promote e-commerce. As excluded are brought into the digital financial platforms, E-commerce could expand its market. As estimated by Morgan Stanley, eCommerce sales reached the US $16 billion For the financial year 2016-17, with a projection of a seven fold growth within the next two fiscals. Cross-border shopping by Indians was Rs 58,370 crore ($9.1 billion) in 2016 and is expected to grow 85 per cent annually in 2017. By 2020 online commerce sales is expected to cross $120 billion.

Diversified digital payment options not only Benefited e-commerce but also paved way for the development of M- commerce in the country. new payment technologies such as Vodafone's mPesa, will enable the rapid growth of mobile shopping in India. These payment channels helped the consumers carry out their shopping across different categories ranging from grocery to electronics and furniture using their featured phones such as a smart phone simply by a top-up cash value by linking their M-Wallets to bank accounts – similar to recharging their prepaid mobile accounts. Studies says that India's M-Commerce market is also estimated to grow up to $19 billion by 2019. Thus, Digital financial services have not only fueled the growth of the e-commerce sector but also opened up a new channel called M-commerce for online commerce across the country.

Reducing gender inequality and empowering women in India is another opportunity brought out by digital financial inclusion (DFI). Women who lack access to financial services due to the lack of property rights and thereby reducing their control and decision making power in the family and society. This can be duly addressed with help of DFS which provides customized financial products and services which are accessible, affordable, and convenient. The DFS such as saving, micro credit, micro insurance and payment at their finger tip can enhance their ability to generate income and manage their financials. It will help them to set up business, to have work and family balance, manage their needs such as health, education, consumption and emergencies. It also enhances their credit worthiness through digital financial transactional records such as their credit score or credit limit and duly repayment via digital payments. Thus, reducing gender inequality and raising their productivity and promoting them to be a contributor of economic growth.

Challenges of digital financial inclusion in India.

In spite of its opportunities, Digital financial inclusion in India face great challenges. These include:

Lack of financial literacy: Financial illiteracy stands as the major challenge that policy makers and regulators face in the process of digital financial inclusion. According to the recent Standard and Poor survey, 76% of Indian adult population lack knowledge about basic finance such as compound interest, risks etc. The Financial Inclusion Insights survey (2016) found that 49 percent of a representative Indian sample had low levels of digital literacy, with digital literacy being even lower for vulnerable groups. Developing Financial literacy programs that enables people to make sound financial decisions, select financial products, which best fit their needs, and know how to use related digital channels, such as ATM, internet banking or mobile banking. To some extend trained and equipped Agent networks can also stand as a supportive mechanism to overcome financial illiteracy.

Regulatory and supervisory risks: Rapid expansion of digital financial inclusion bring in several regulatory and supervisory challenges such as regulatory, legal, operational, reputational and customer related risks. The Reserve Bank of India should respond to advancements and related risks to make sure that they do not go unchecked. If these risks are unchecked, it may have worse impact on the digital financial inclusion process such as financial service providers become reluctant to deliver services and consumers shift from digital to traditional cashed based transactions. RBI's regulatory guidelines on mobile banking in 2008 permitted banks to transfer funds from one bank account to another through the mobile platform. It was the first initiative in such a nature to curb regulatory and supervisory risks. Thus, it must be able to address these risks that are resulted out of advancements in the financial sector by duly amending its regulatory and supervisory tools like Adaptional framework-risk management frameworks, legalization, settings, databases, harmonization and integration .

Digital divide: Digital divide is a major obstacle in the path of digital financial inclusion in India. Digital finance is often considered as a solution to extending access to the financially excluded, as it offers new opportunities to personalize financial services and deliver them through accessible digital channels. As DFI requires access to digital channels such as internet and mobile phones, digital divide will be a hindrance for the policy makers and financial service providers to in widening scope of DFS. It has a demographical, educational, economical and gender horizon. In India most of the rural villages have inadequate infrastructure (electricity, mobile towers, etc.). Among poor households (including urban ones), there are few Smartphone, and even the feature phones are largely owned by men. Financial Inclusion Insights (2016) states that only 44 percent of women in India owned phones, compared to 75 percent of men. Studies reveals that in India, every tenth rural household only have access to internet whereas in metro every second household has internet access. Every second graduate household has at least one member who accesses the internet versus every hundredth in the case of illiterate household. Nearly 47% of rich households have at least one member with access to internet in contrast to only 4% of poor households. however 80% of Indian household have mobile phones out of which only 20% access it for internet banking. If we do not address the underlying issue of digital divide then it would result in failure of digital financial inclusion initiatives.

Agent network problems: Agents play an important role in bringing about India's transition to digitally-based financial inclusion. In India there are around 600000 agents providing digital financial services all around the country. They faces a wide variety of problems in digital transmission such as lack of infrastructure. for example, network connectivity and liquidity crunch which made them unable to complete transactions on demand which inturn affects customer's confidence. Their awareness and knowledge about the products were limited due to the lack of training and customer help support services from financial service providers. They are comparatively compensated less say between Rs. 2000 to 2500 per month. Thus, regressive measure must taken to address these issues to enhance agent network to facilitate digital financial inclusion.

Problem of adoption by informal sector: In India, informal sector consists of nearly 5.84 crore establishments providing employment to 12.77 crore of people. It faces problems in adopting digital financial channels which include bank access points such as an E-POS. This can be overcome through amending the existing administrational mechanism in a manner that makes use of such channels a mandate. Another additional problem is the regulatory or tax vigilance authority's demand for income tax returns and other demands upon informal businesses will force a large sections to continue to transact in cash. Relaxing these vigilance especially for the transactions made in small towns and rural areas for a period of time at least to a certain limit will help these establishments to adopt digital financial services.

Presence of transactional cost: Another obstacle in the path of digital financial inclusion in India is the presence of transactional cost (such as a service charges of .25% for every Rs. 1000 and RS.10 for every transaction of Rs. 2000. There is an urgent need to reduce the transaction cost by removing charges levied for digital financial services such as credit or debit cards and online transactions. A large portion of rural transactions are micro payments and imposing transaction cost will act as an disincentive to use digital payments. To quote the recent case of hiking SB's minimal balance and service charges which led a mass public opposition? Hence, there is a need to revisit these charges especially in rural areas.

Financial cyber crimes and frauds: Financial cybercrime in India has been steadily increased by 90%over in the last 10 years. Most of the digital financial platforms are under the risk of cyber attacks. RBI reported around 9,500 (2013-14), 13083 (2014-15) and 16,468 (2015-16) cyber crimes related to ATM, debit card, credit card and net banking frauds. In India, over 3.2 million debit card details were stolen by hackers from ATMs and POS machines in October 2016. The worst hit was SBI, HDFC, ICICI, S Bank and Access Bank. The total amount involved was Rs. 1.3 crore. Bank of Maharashtra recently reported a loss of Rs. 25 crore in March as frauds exploited a bug in their UPI application and core banking software. Around 70% of ATM in India are outdated. The RBI set up the Reserve Bank Information Technology Pvt Ltd (ReBIT) to take care of its IT requirements, including the cyber security needs of the bank and its regulated entities (Shashidhar KJ, 2017). These datas throws light on the potential risks that a customer must face while he/she migrate to digital platform for financial transactions and may prevent them to continue in cash based transactions. A strong cyber security setup and creating awareness among people will prevent them from falling into the hands of fraudsters and thereby enhancing Digital financial inclusion.

Problem of interoperability: Interoperability is the ability of different networks/systems/ tools to communicate with each other, exchange and use/process data. The term has gained importance with the advent of digital finance in emerging economies. India has an intermediate, market wide and multilateral interoperable environment. Some form of interoperability is present in India but progress remains slow in increasing the number of use cases and volume of transactions per use case. It necessitates coordination between different regulatory agencies, such as the financial sector regulators: Reserve Bank of India (RBI) and Ministry of Finance; telecom regulators: Telecom Regulatory Authority of India (TRAI) and Ministry of Communications and Information Technology; Consumer protection ministry: Ministry of Consumer Affairs, Food and Public Distribution; Competition regulator: Competition Commission of India (CCI), and Central and state agencies.

UPI unified payment interface, *99# and BHIMA are some of the initiatives that India have implemented to provide interoperability but unfortunately, its scope was limited. Digital financial channels such as mobile wallets are not interoperable as Transferring money requires sender and

receiver to have the same company's account. for example MobiKwik to MobiKwik or paytm to paytm. Merchants faces difficulties to accommodate so many different payment providers as there are several mobile operating systems or mobile handset sellers offering payments services in the country. This causes tremendous hurdles for the customers as well as the merchants to stick on to digital financial channels like the mobile wallets. Thus, India must focus on developing digital infrastructure that accommodates interoperability in order to achieve digital financial inclusion.

Lack of sound financial and digital infrastructure: Last but not the least concern, the lack of financial and digital infrastructure have also brought in challenges for DFI initiatives. Despite of its extensive efforts to expand its financial and ICT-digital infrastructure, India have been questioned for its sound and effective ways to oversee issues such as data security, quality of service and network reliability. For instance, There are valid concerns about privacy and civil liberties that puts digital financial transactions at risk, problem of inter operablety, etc. These can be addressed only through a sound and safe infrastructural development.

Conclusion

Digital finance a strong tool for a nation to achieve its goal of financial inclusion. It provides affordable, secure and convenient financial platform for the excluded and low income people to get into the financial system. The process of Digital financial inclusion brings in promising opportunities which fosters the growth of Indian economy. DFS helps Indian economy to address the key market failures such as information asymmetry, behavioral biases, high transaction costs, incomplete property rights and imperfect competition which otherwise inhibited the delivery of traditional financial services and thereby raising the poor out of vicious circle of poverty. It enhances economic growth and stability by means of capital accumulation and economic participation. Digital financial services provides an opportunity to alleviate poverty by availing low income groups with affordable and secure financial services such as savings, payment and remittance, credit and insurance. It thus profiles the low income and disadvantaged groups into generators of financial assets and potential contributors to the economic growth.

Extensive use of digital financial services can boost the annual GDP of India in a substantial manner. Digital financial inclusion initiatives paves ways for the government of India to enhance transparency, realize the actual tax revenue and reduce leakage of public expenditures, avoid tax evasion, reduce the size of informal or shadow economy etc. digital finance has the potential to shrink the India's informal or shadow economy at least by 5%and improve adherence to tax laws. DFS such as digital payments raises the productivity of financial and non financial businesses, government and individuals which in turn lead to creation of handful of job opportunities of nearly 21 million in all sectors OF India. It has significant potential to support Financial Institutions (banks and MFIs, non-Financial firms (mobile network operators-MNOs) and third party providers (agents and payment aggregators) to expand the delivery of basic financial services at an affordable, secure and

convenient manner to people at a large particularly poor and disadvantaged through digital channels like internet banking, mobile-phone-enabled solutions, electronic money models, and digital payment platforms. Digital financial inclusion (DFI) initiatives supports financial institution (Banks and MFIs) for business expansion by making their aspiration of financial inclusion a reality in a more affordable and efficient manner. It increases financial institution's operational efficiency and financial performance, perk up productivity, competitiveness and risk management and enhances financial position and profitability by assisting in market penetration and customer empowerment. DFS has played an important role in promoting E- commerce in India. E-commerce in India started at a rather low pace due to the low usage of digital payment systems, backward infrastructure, straddling telecommunication, mobile internet and unsuitable logistics arrangements especially in rural areas. It is said that Digital payments usage will continue to grow in India due to the digital financial inclusion initiatives, which would help promote e-commerce. As excluded are brought into the digital financial platforms, E-commerce could expand its market. Diversified digital payment options not only Benefited e-commerce but also paved way for the development of M- commerce in the country. new payment technologies such as Vodafone's mPesa, will enable the rapid growth of mobile shopping in India. Reducing gender inequality and empowering women in India is another opportunity brought out by digital financial inclusion (DFI). Inspite of its opportunities, Digital financial inclusion in India face great challenges. These include Regulatory and supervisory risks, lack of financial and digital literacy, digital divide, agent network problems, lack of Sound financial and digital financial infrastructure, problem of interoperability, presence of transactional cost, financial cybercrimes and problem of adoption by informal sector.

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DIGITALIZATION AND ITS IMPACT ON INDIAN ECONOMY

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Abstract

The digital economy or internet economy is influencing the daily activities of every common man. Digital India programme is a progressive step taken by the government of India to make our country a digitally empowered country. It is considered as the Third Industrial Revolution which is expected to generate more employment opportunities, business opportunities, GDP growth, labour productivity and new market opportunities also. The prime objective of implementing this programme is to provide electronic government services to Indian citizens by reducing the paper works and also by saving time and money. This programme also helps to connect the rural people with the high speed internet networks to access any information needed. Creation of digital infrastructure, digital literacy and delivering services digitally all over the nation are the key elements of Digital India Programme. So thereby we can reduce the gap between government services and people. India is the second largest telecom market in the world with 915 million wireless subscribers and world's third largest internet market with almost 259 million broadband users. A digitally connected India can help in uplifting the socio economic condition of people through the development of economic activities by providing easy access to education, health and financial services. For the better and bright future of India, digitalization programme should be effectively implemented. But for the overall growth and development of the nation, together with ICT we should give more importance in enhancing the areas such as education, basic infrastructure etc. This paper aims to analyse the phases of the implementation of Digital India programme, digital payments in India, the impact of digitalization on various sectors of Indian Economy and also examines challenges and obstacles of digitalization in India.

Keywords

Digital India, digital empowerment, digital literacy

Introduction

The digital economy or internet economy is influencing the daily activities of every common man. Digital India programme is a progressive step taken by the government of India to make our country a digitally empowered country. It is considered as the Third Industrial Revolution which is expected to generate more employment opportunities, business opportunities, GDP growth, labour productivity and new market opportunities also.

It is a commonly accepted fact that Digital India Programme is the outcome of many technological innovations. It changes the lives of people in many different ways. Now, every nation tries to make its country as a digitalized one and make the society into digitalized and empowered. This programme was the initiative of Narendra Modi, Honorable Prime minister of India with the objective of making India as a digitally empowered country. It aims at providing all services through the media of electronics and promoting digital literacy to all over the nation. This initiative of the government makes sure that the government services are easily available to the people and they get the benefit of this programme also. So Digital India Programme is not just an initiative, it is considered as the need of the country where the majority of the population does not have any access to the internet.

Creation of digital infrastructure, digital literacy and delivering services digitally all over the nation are the key elements of Digital India Programme. So thereby we can reduce the gap between government services and people. India is the second largest telecom market in the world with 915 million wireless subscribers and world's third largest internet market with almost 259 million broadband users. A digitally connected India can help in uplifting the socio economic condition of people through the development of economic activities by providing easy access to education, health and financial services.

Major vision of Digital India

Key vision areas of Digital India Programme are the following.

1) Digital Infrastructure as a Utility to Every Citizen
   - To provide high speed Internet Connectivity as a core utility for delivery of services to citizens
   - To provide digital identity that is unique, lifelong, online and authenticable to every citizen
   - To increase participation of citizens in digital and financial economy through mobile technologies and bank accounts
   - To provide easy access to citizens to common service centers.
   - To provide shareable private space on a public cloud for every citizen
   - To ensure Cyber safety and Security

2) Governance and Services on Demand
   - To Integrate various government departments to provide seamless services to citizens
   - To provide Real–time services to citizens through online and mobile applications
   - To ensure availability and portability of all citizen entitlements on e-clouds
   - To transform services digitally to increase the ease of operating businesses
   - To promote e-payments and cashless economy
   - Leveraging Geospatial Information Systems (GIS) for decision support systems and development

3) Digital Empowerment of Citizens
   - To increase digital literacy to enhance digitalization
   - To provide accessibility to digital resources and infrastructure
   - To design digital resources/services compatible with Indian languages
   - To increase participation in government by collaborating digital platforms to include citizenry
   - To encourage virtual submissions. No requirement for physical submission of documents or certificates.

Pillars of Digital India Programme

Digital India Programme comprises of various initiatives and each target to make India into a "Knowledge Economy". Nine projects have been undertaken to achieve this objective. They are as follows.

1) **Broadband Highways:** One of the main objectives of this project is to cover 205 lakh grama panchayath under the National Optical Fibre Network (NOFN) by December 2016. It also covers three broadband for all rural, urban and National Information Infrastructure.
2) **Universal Access to Mobile Connectivity:** This project aims to cover 44000 villages by providing mobile connectivity by March 2018. It also focuses on increased network penetration and filling all gaps that exists in the structure of connectivity.
3) **Public Internet Access Programme – National Rural Internet Mission:** Two major component of this programme are Common Service Centres (CSC) and Post Offices. Common Service Centres covers 2.5 lakh villages with an investment of Rs.4750cr and it also covers 1.5 lakh villages. And these Post Offices will act as multi service centres for the people.
4) **E-Governance:** This project makes use of IT to simplify and fasten the government process and delivery of services and thereby we can improve the efficiency and transparency of government services.
5) **E-Kranti:** This initiative of Digital India Programme provides electronic delivery of services to the people which covers the areas of health, education, financial inclusion, justice and security.
6) **Information for all:** This project facilitates easy and open access to information for citizens. Here it acts as open data platform.
7) **Electronics manufacturing:** It targets NET ZERO imports by 2020. So the government tries to manufacture the electronics indigenously and thereby reducing the imports. The major items covered under this project are smart energy meters, micro ATM, smart cards and Consumer & Medical Electronics.
8) **IT for Jobs:** It provides training to youth who works in IT sector. This project aims at providing IT sector jobs for 10 million people in small towns and villages. It also focuses on training of 5 lakh rural workforce on Telecom and Telecom related services.
9) **Early Harvest Programme:** The major projects covered under this are Aadhar

based biometric attendance system, Wi-Fi in all universities, secure e-mail within government, public Wi-Fi hotspots, school book to be e books, SMS based weather information, disaster alerts, National Portal for Lost & Found Children.

Digitalization and Demonetization

On November 8, 2016, Mr. Narendra Modi, honourable Prime Minister of India announced that the notes of denomination Rs.500 and Rs.1,000 would not be legal tender from November 9, 2016 onwards. Notes worth Rs. 15.44 lakh were demonetized with the objectives of eliminating black money and fake Indian currency notes. In India, majority of the black money are held in the form of gold, stocks, foreign currencies etc. This initiative not only shook the tax evaders but also pushed India to become more digitally empowered country. This highlighted the importance of the implementation of the concept of cashless economy in India. But it is true that more than half of the population does not have access to the formal banking system and a small percentage of people are familiar with the digitalized facilities.

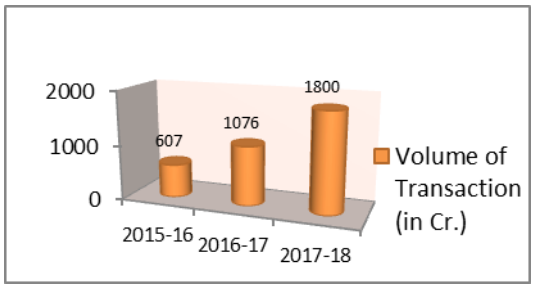
According to the RBI Report 2016, the average number of card transaction per inhabitants is 6.7 compared to China (14.4). Report also shows that only 15 percent of online or point of sale transactions take place using credit or debit cards. Among them, 88 percent use cards to withdraw cash at ATMs. Demonetization also encouraged the usage of mobile wallet or digital payment methods for the transactions. With the implementation of this programme, more transparency came in the flow of money in the economy. Mobile wallet or digital payments provides a wide range of payment options so customer can make purchase and transfer very easily.

Digital transactions and payments in India

According to the Provisional digital transaction data of RBI, October 2017 saw the highest ever transaction volume at 965 million. It shows a 10 % increase in the volume of transaction when compared with the month of September 2017 which registered 877 million volume of transaction. In digital transaction, Unified Payments Interface (UPI) acts as a main driving force. There is a definite growing trend in digital payments because more people are adopting and making use of this facility. Data on increased volume of transaction indicates that people are developing the habit of making payments digitally.

In terms of the number of digital transactions, smart phone based transactions is increasing during the period October 2016- November 2017. In October 2017, debit and credit card transaction has increased to 255.7 million transactions as against 240.3 million in September 2017.

The following figure shows total digital transaction during the period 2015- 16 to 2017-2018.

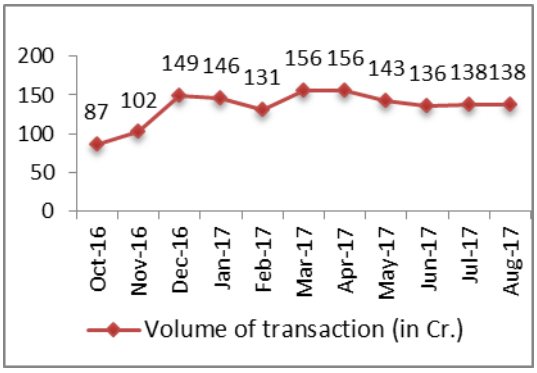


Source: Ministry of Information Technology

Figure 1: Total digital transaction (in Cr.)

Data on total digital transaction shows that it is increasing over the years. During 2015-16 total digital transaction is 607crore. During 2017-18, total digital transaction is 1800crore.

Figure 2 shows monthly digital transaction. Transaction is increasing during the period October 2016 - December 2016. Effect of demonetization is seen in the month of December 2016. Monthly digital transaction is high in March and April 2017. And it is decreasing over the months.

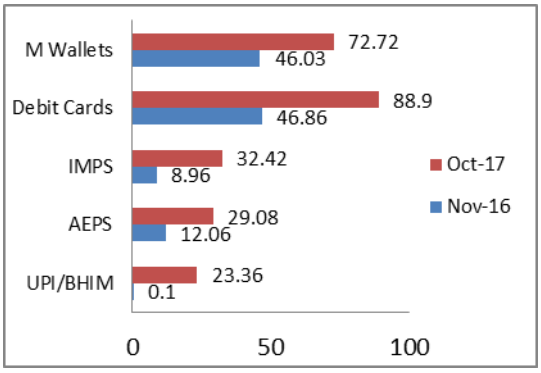


Source: Ministry of Information Technology

Figure 2: Monthly Digital Transaction (in Cr.)

With the expansion of the Point of Sale (POS), there is a growing trend in the digital payments in our country. But still there is a need to push card payments in smaller towns and cities. Besides cards and UPI, wallets is the main driving force in the payments space which also shown a growth in October 2017. Wallets using transactions on an average per month is 87.5 million in September 2017 and 96.2 million in October 2017.

The following figure shows average daily digital transactions in India.



Source: Ministry of Information Technology

Figure 3: Average daily digital transactions (in lakh)

Impact of Digitalization on Indian Economy

Digital India programme is the beginning of digital revolution. Once it is implemented successfully, then it will open a new window for opportunities to its people. The success of digitalization programme can be analysed on the basis of its impact on various sectors of our economy. When we analyse the impact, we can see that in every sector some changes have occurred with the implementation of digitalization. This initiative of the government had resulted in the creation of new job, technical advancement and knowledge, acceleration in economic growth, better quality of life, high degree of financial literacy and financial inclusion. Digital India Programme has contributed much in the acceleration of economic growth of the country.

Major impact of digitalization is discussed under the following heads.

Impact on Agriculture Sector

Agriculture sector is very important being the largest employment provider in the country. More than half of the population is

engaged in agriculture sector whereas the share of contribution to total GDP is decreasing over the years. But its performance can be improved with the process of digitalization. Reliable information on climate, soil, seeds, inputs etc will help the farmers to produce more in an efficient manner. Information on price of inputs and outputs provides better utilization of resources also help the cultivators to earn profit. Thereby we can achieve an improvement in the performance of this sector. Digitalization also ensures better employment opportunities. Excess labour power in the agriculture sector can be utilized for other productive activities which will result in the higher GDP growth. Government has introduced so many schemes like Kissan Credit Card, Soil Health Card Scheme etc to motivate the farmers to move towards better farming skills. Farmers can also access any information what they require. Therefore, it helps to increase the level of agricultural literacy and thereby we can achieve remarkable progress in the sector.

Impact on Industrial Sector

Industrial sector plays an important role in the economic growth and development of the country. Digitalization aims to improve the sectoral performance which resulted in the increased share of GDP. Market reach is the important benefit of digitalization of industrial sector. Due to the availability of internet and availability products through online sources, producers are able to reach the customers in every parts of the country within seconds which helps them to capture more markets. Product development is the yet another aspect of digitalization. With this initiative, producers can produce new product mix and new kinds of products are available in the markets which have digital characteristics. Digitalization ensures transparency in trade which helps to maintain trade relations with other countries indirectly it raises the competition among countries which leads to better quality of products. Creation of new job opportunities is the main advantage of digitalization. It provides technical knowledge thereby it increases the technical skill of the workers. But the adverse impact of digitalization is that man power is replaced by machines and technology which leads to the unemployment of certain groups.

Impact on Service sector

In India, service sector is the largest contributor to total GDP since its share to GDP is increasing over the years. Digital India initiative creates employment opportunities for 17 million people directly or indirectly. Within the next 5 years we will emerge to be a leader in some sectors like health, education and banking in using IT. Digitalization will provide skill based employment opportunities to its people and thereby we can reduce the problem of unemployment. Now the banking sectors are digitally empowered. Banks provide the digitalized facilities like internet banking, mobile banking etc improves the performance of banking sector. When people are financially literate, they will use the products and services offered by the banks for their own benefits. This accelerates the process of financial inclusion. So with the digitalization banking activities has become easy and cost effective. Ease in availability of information and

knowledge enhances the better working of education sector. Government has introduced broadband connectivity to all schools and other educational institutions which helps in the overall learning procedures and learning process of the students. Together with this, digitalization has positive impact on health care sector, telecommunication, tourism and insurance sector. So it is clear that digitalization improves the performance of service sector which results in the higher GDP growth.

Obstacles and Challenges

Digital India Mission is facing multiple challenges and obstacles in the successful implementation. Major challenges are as follows.

1) ***Lack of digital literacy:*** As per the Report of ASSOCHAM 2016, around 950 million Indians do not have internet accessibility. High level of digital literacy is one of the biggest challenges of the programme. People are lacking the technical knowledge of using mobile phones and computer.

2) ***Lack of knowledge regarding the use and advantage of digital India programme:*** To create awareness among population about its use and benefit is another challenge. For this government have to conduct many awareness programmes at the village level.

3) ***Slow development of infrastructure and lack of technology:*** Infrastructure requirements and its unavailability, lack of technology hinder the process of digitalization. For the successful implementation of the programme, we need high quality basic infrastructure, technical infrastructure and technology. And high speed internet is required to facilitate the online delivery of various government services which is the biggest challenge of Digital India Programme.

4) ***Fear of Cyber crime and lack of confidence and trust:*** Cyber safety is the prime concern of all people when they access internet. As a digitalized country, India is not given much importance to Cyber safety. Due to the fear of Cyber crime and safety issues people are reluctant to make transactions through online. In India, cyber laws are not paid that much attention. Therefore, people lack the confidence on such schemes.

5) ***Inadequate finance and higher costs:*** In India, huge financial resources are required from different sources for the successful implementation of such big initiatives. And the costs for electronic device, equipments and internet services are also high for an average Indian citizen.

These are the major obstacles and challenges of Digital India Programme. Together with this, poor participation of private sector in government projects, large number of regional languages and wide digital divide between rural and urban areas also hinders the smooth functioning of this campaign.

Conclusion

This paper tries to analyse the phases of implementation of Digital India Programme, digital payments in India, impact of digitalization on Indian Economy and the challenges and obstacles of digitalization in

India. It is found that the digital economy or internet economy is influencing the daily activities of every common man. Digital India programme is a progressive step taken by the government of India to make our country a digitally empowered country. A digitally connected India can help in uplifting the socio economic condition of people through the development of economic activities by providing easy access to education, health and financial services. There is a definite growing trend in digital payments because more people are adopting and making use of this facility. Data on increased volume of transaction indicates that people are developing the habit of making payments digitally Digital transactions includes net banking, smart phone based transactions, UPI, debit cards/credit cards, M-wallets, POS etc. is also growing day by day. Digitalization has wider impact on every sector like agriculture, industry, banking & finance, education and health. Digitalization also helps to generate more employment opportunities, business opportunities, GDP growth, labour productivity and new market opportunities also. Digital India Mission is facing multiple challenges and obstacles in the successful implementation. This paper concludes with a suggestion that for the better and bright future of India, digitalization programme should be effectively and successfully implemented.

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INFLUENCE OF INFORMATION COMMUNICATION AND TECHNOLOGY (ICT) ON AUTOMOBILE INDUSTRY: CASE OF MARUTI SUZUKI LTD

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Abstract

Information and Communication Technology (ICT) can very well help the automotive industry to meet the current challenges and provide a superior product and services to consumers. Today ICT is not only playing a supportive role but has become an integral part of the product and virtually the backbone of the industry. The focus of many companies in both ICT and auto industries is on the 3Es factors – emerging markets, emerging technology and environmental concerns which are guiding investments and growth in both the industries. The automotive industry in India is one of the largest in the world with an annual production of 23.96 million vehicles in FY (fiscal year) 2015–16, following a growth of 2.57 per cent over the last year. The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP). Maruti Udyog limited is a frontrunner in automobile industry in India. The study try to explore how emerging markets, emerging technology and environmental concerns influence the demand for Maruti products. Secondly to understand how Maruthi Suzuki the most preferred brand from Maruthi house could address the concerns of emerging markets, emerging technology and environmental concerns in todays market. The study use primary data collection method with a sample size of 100 individuals. The results shows that the customers are increasingly aware of the emerging technology and concerned about the environment. It is now necessary to incorporate these elements in product design.

Keywords

ICT, Automobile industry, demand, Maruthi Suzuki

1. Introduction

In 1897, the first car ran on an Indian road. Through the 1930s, cars were imports only, and in small numbers. An embryonic automotive industry emerged in India in the 1940. Hindustan Motors was launched in 1942, long-time competitor premier in 1944, building Chrysler, Dodge, and Fiat products respectively. Mahindra and Mahindra were established by two brothers in 1945, and began assembly of Jeep CJ-3Autility vehicles. Following independence in 1947, the Government of India and the private sector launched efforts to create an automotive-component manufacturing industry to supply to the automobile industry. In 1953, an import substitution programme was launched, and the import of fully built-up cars began to be

restricted. Information technology is defined as the application of computers and techniques of using computers to the handling of masses of data. The technology we hold in our hands today is utterly amazing. From body-nets that can link small computerized devices on our eyeglasses and belts with others in our cars and homes, or software that can hold a conversation with a human. We live in a world where Email, multimedia, CD-ROMs, and virtual reality are truly our reality.

The global auto industry crossed an important threshold last year when the number of cars on the world's roads surpassed one billion. Despite the growing economic gloom, worldwide car sales increased 5% in the first half of the year. While sales have slowed in the developed world, emerging markets continue to grow rapidly. For example: Russia, posted a 27% jump in July in car sales from a year earlier. The difference in growth rates is changing the standards within the world's 10 biggest auto markets. Once formidable slip, even as other countries are moving up the rankings. Auto majors are increasingly trying to capitalize on the shift, opening new plants in emerging markets and developing cheaper, smaller cars to suit the demand of new consumers. The raise of new cars nations is also reshaping the industry and the brands. India's TATA Motors own Jaguar Land Rover and China's Greely owns Volvo. Chinese and Indian car brands are selling their models in their models as far away as Brazil. Along with a recovering automotive industry in the UK, Germany, Sweden, Poland, and other European members states, it is forecast that increased demand for cars from customers in Asia and North America will successfully offset declining vehicles sales volumes in Russia and Brazil, and help automobile manufacturing sell over 77 million vehicles by the end of 2016, up from less than 54 million units in the year between 2000 and 2013.To increase worldwide car sales, car market is particularly keen on tapping into the growing affluence of Asian markets, where the passenger vehicle sales have doubled over the past 7 years.

The Indian Four-Wheeler industry is one of the largest in the world. Within the industry, the overall passenger vehicle (PV) segment account to a mere 14%.India has the 5th largest passenger vehicle and commercial vehicle market in India was introduced in the year 1898. Initially, the markets in India did not experience much boom but with intervention of the favourable government policies the automobile market and car market in India, specially, have seen great developments. The growth in Indian automobile industry happened due to good network of roads and transport system, with increase GDP, per capital Income and high ownership capacity several foreign companies coming in India led to a significant rise in the lifestyle of the people residing in the country, shedding of the geographical limitations through the intervention of media, the festival season, interest rates and new car launch made the customer to go for four- wheeler, due to huge demand many of the established car brands in India are out of stock, help the industry surpass the mark of 1.2 lakh cars that were sold in August 2009 in India. This also suggests that both used cars and new cars will be in demand for a long period.

The automotive industry in India is one of the largest in the world with an annual production of 23.96 million vehicles in FY (fiscal year) 2015–16, following a growth of 2.57 per cent over the last year. The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP). The Two Wheelers segment, with 81 per cent market share, is the leader of the Indian Automobile market, owing to a growing middle class and a young population. Moreover, the growing interest of companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 13 per cent market share. India is also a prominent auto exporter and has strong export growth expectations for the near future. In FY 2014–15, automobile exports grew by 15 per cent over the last year. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the Two-Wheeler (2W) and Four-Wheeler (4W) market in the world by 2020.

2 Review of Literature

The company is got a great goodwill and is satisfying its customers at greater level yet the consumers expect more from the company. The company wanted to start a brand for its Luxury Cars hence, this was the reason for start of the NEXA as a brand for luxury cars. NEXA is a brand which sells car which are at a higher cost pricing which is affordable to the high-income groups, who prefer luxury cars. These cars are also called as the cars which are a luxury car for the middle-class people who would like to own a car with all luxury as that of a car of Audi, Benz etc. Not the entire comfort of such cars but a part of the comfort that they provide as that of those cars. They didn't keep the same name as Maruti Suzuki was because Maruti Suzuki is well known as a company for people with middle income and safety of people. They didn't want to change the mind set of people telling that Maruti is selling luxury cars and loose its existing customers, 'this was the reason for change in the name of MARUTI SUZUKI to NEXA for luxury cars.(Economic Times, 2018) 'The country's largest car maker Maruti Suzuki BSE -0.64 % posted a 29.4% growth in domestic sales at 1,37,321 units last month on account of demand in the ongoing festive season, 'this is the highest ever domestic sales for the company in terms of absolute volumes in 2017.(Economic Times, 2018) Sales for the company increased across segments. While sales of mini cars Alto and WagonR went up by 24.8% to 44,395 units, those of compact cars (Swift BSE 1.57 %, Ritz, Celerio, DZire, Baleno) increased by 12.3%. (Maruti Suzuki, 2018) The Hansalpur-based facility in Gujarat is Suzuki Motor Corporation's first wholly-owned unit in India. It has been producing close to 10,000 units of premium hatchback Baleno a month. Maruti Suzuki's key strategy to tackle competition and gain outperformance has been due to new launches at regular interval, said the company's management in a conference call with analysts. The company is ramping up the production in its Gujarat plant to full capacity in the second half of FY18 for the first assembly line and the second assembly line commencement is planned in 2019. Maruti Suzuki's revenues grew by 17.4%

that is Rs 17,550 crore. However, its net profit took a hit, as it was up 4.4% due to GST.

3 Methodology

The method used for collection of data is Survey of 100 people from different background were being selected for the survey. The first-hand data is collected for an accurate analysis of demand of Maruti Suzuki Cars in the past years. It consisted of 10 Questions which was both open ended and close ended. The survey was classified on the based on the Qualification, Income, Age, and Knowledge about the Automobile Industry, Area of Location and Personal Interests. The people are selected on the basis of the qualification like Working Professional (Private and Public Sector) and Students. People of all level income groups are being selected in the survey (Top and Middle Level Group).People who are targeted are in the age group of 21 years to 45 years. People who are interviewed are working professionals hence most of the members are graduates. The people who are taken are most often engineers, Students and doctors. This is the distance that the people usually cover for travelling is also taken into consideration in the Survey of the people. The people who like to have only Maruti Suzuki and people who already own this car are taken into consideration in this so that we could get accurate information regarding the comfort and Consumer Satisfaction in these cars.

4 Results and Discussion

Maruti Suzuki has had a successful year with the Baleno and Vitara Brezza storming the Indian automobile market. With Maruti Suzuki dominating almost half of the passenger vehicles segment in India, the company has big plans to expand its products to different countries in order to explore its prospects in new and emerging markets. The study tries to explore how emerging markets, emerging technology and environmental concerns influence the demand for Maruti products.

- As Maruti Suzuki enjoys its goodwill the company is easily able to expand to almost all the countries over the world sales.
- "In following months, it (Baleno) will be launched in Caribbean Islands, Uruguay, Bolivia, Costa Rica, Honduras, Panama, Peru, South Africa, Indonesia, Middle East countries like UAE, Oman, Kuwait, Lebanon, Qatar, Saudi Arabia," a company spokesperson was quoted saying. This statement shows that the company is growing at its maximum and has increased sales not only in India but also almost all over the world.
- The emerging markets are the all over the world. The recent news that the Toyota – Suzuki Partnership is going to start and which would lead to a great boon to the company for all involved at a time when India is tightening regulations over vehicular emission and pushing for greener technologies. They could harness Toyota's expertise in manufacturing and technology, and Suzuki's deep understanding of the Indian market through unit Maruti Suzuki to

make products that meet India's requirement's – primarily vehicles that offers value for money. The stake is particularly high for Suzuki, given that it gets about 45% of operating profit from India where unit Maruti makes one in every two cars sold. And, the company isn't wasting any time to embrace new technologies that it may require to make its products future-proof.

- It announced a factory to make lithium ion batteries used in electric and hybrid vehicles – in joint venture with Toshiba and Denso. And, if one tries along the proposed partnership with Toyota, Suzuki is clearly thinking far ahead into the future. The move, in fact has a potential to drive car electrification in the country.
- It is perhaps this far-reaching approach and deep engagement of Suzuki that have boosted subsidiary Maruti's performance in the past few years. Among the milestone it has crossed of late, the Indian automaker raced ahead of Hyundai Motor, Renault and Audi to enter the Elite Club of the world's top 10 automakers in terms of market capitalization.

Our next enquiry was on how Maruti Suzuki is the most preferred brand from Maruti house could address the concerns of emerging markets, emerging technology and environmental concerns in today's market. On the basis of the entire survey the people prefer to use Cars of Maruti Suzuki as they provide a lot of comfort to the people in driving, mileage it gives to its users, the after-sale services and as it is available to people of middle class and higher-class people.

The most common reason for preferring Maruti Suzuki Cars are –

- Price
- Lower maintenance cost

Price can be told as the main reason because these cars which are produced are affordable to the consumer (e.g. Maruti Alto – Rs.3,22,000 in 2018). This is the cheapest car that it is providing to its consumers with good space and comfort seating. This tells that the car provides the best of its best services at the cheapest rates to its customers. Lower maintenance cost is the repairs and after sale service that Maruti Suzuki provide is the cheapest to its customers. Due to this reason most the people prefer to buy Maruti Suzuki cars. The service that thy provide are affordable and consumers are satisfied to the best by the services that it provides to them. These are the reasons why Maruti Suzuki is preferred as a brand and as they provide best services to its customers and at a cheapest rates and Lower Maintenance cost. As such a huge company the always tries to expand its company in the market it has established its centres all over the world. The demand of the company is so huge that the two production units in Gurgaon and Manesar are sufficient for the manufacturing of the cars that the demanded by the consumers. Auto sales may have been sluggish for the industry, thanks to the prolonged economic slowdown, with volumes being about flat for two consecutive calendar years. But this has not been a problem for market leader

Maruti Suzuki, which actually saw its market share grow significantly over those years. In an interview with CNBC-TV18, Maruti Suzuki Chairman RC Bhargava said the company was confident of achieving double-digit growth going forward. The high demand for the company's products reflects in the fact that it has been working at full capacity, and faces a problem of expansion. "We have reached what was supposed to be capacity in Gurgaon and Manesar and now we have to adopt some ways by which we can produce maybe 150,000-160,000 units more than planned," he said. Maruti Suzuki is the car that most people with mid income prefer as it is affordable. The improvement in technology has made people to explore new cars which have increased the demand of Maruti Suzuki. People tend to explore the cars just by advertising hence the advertising strategy of Maruti Suzuki is attractive and attracting customers at its maximum.

In recent years, India has emerged as a leading centre for the manufacture of small cars. Hyundai, the biggest exporter from the country, now ships more than 250,000 cars annually from India. Apart from Maruti Exports' shipments to Suzuki's other markets, Maruti Suzuki also manufactures small cars for Nissan, which sells them in Europe. Nissan will also export small cars from its new Indian assembly line. Motors exports its passenger vehicles to Asian and African markets, and is preparing to sell electric cars in Europe in 2010. The firm is planning to sell an electric version of its affordable car the Tata Nano in Europe and in the U.S. Mahindra & Mahindra is preparing to introduce its pickup trucks and small SUV models in the U.S. market. Bajaj Auto is designing a low-cost car for Renault Nissan Automotive India, which will market the product worldwide. Renault Nissan may also join domestic commercial vehicle manufacturer Ashok Leyland in another small car project. While the possibilities for the Indian automobile industry are impressive, there are challenges that could thwart future growth. Since the demand for automobiles in recent years is directly linked to overall economic expansion and rising personal incomes, industry growth will slow if the economy weakens. The above reasons substantiate why Maruthi is the most preferred brand in India

There is a huge competition among all the Automobiles Companies to release the best car into the market and the consumers prefer to buy only their car. But the entire hit of the car goes on the marketing, brand name of the company, the model, capacity, efficiency, comfort, Road clearance, features, Value for money, mileage, Price, Consumer preferences, consumer credit facility, Price of related commodities, Income of the consumers, Government policies (Subsidies), depreciation value, Bandwagon Effect(status)

Based on the survey the major demand determinants for Maruthi are the number of kms that people travel home to company is about 20-30kms of most of the individual. The time taken by maximum number of people to commute on an average is about 1-2hrs on daily basis. The maximum number of people travel in ‘CAR’ from home to company and vice-versa is about 90%.This analysis gave us an equal ratio of 1:1, that is the number of people using 1 car and 2cars. This states that maximum people have 1-2

cars. Most of the people prefer SEDAN compare to other cars due to their comfort and looks like a luxury car. The maximum number of people knows Maruti Suzuki as a great brand and they prefer to buy them because of the goodwill it has maintained in the market. The study showing that the maximum number of people own Maruti Suzuki Car and always would prefer to have Maruti Suzuki Cars. People usually prefer to have a car which gives a millage of about 20-25kmpl. Maximum number of people prefers to have a car that gives an average luggage space. Maximum number people say Yes to have a after sale services after purchase of the car. Which is been fulfilled by the company by giving Warranty and Guaranty to its customers.

5 Conclusion

Automobile market today is very dynamic and competitive with a range of players and product. There are many reasons for the impressive growth of Indian passenger's car Industry. Some of these are easy availability of vehicle finance, attractive rate of interest and convenient instalments. In today's cutthroat competition it is very difficult to survive. Stiff competition has forced manufactures to be innovative and responsive to customer demand and needs. Maruti Suzuki India Limited is a leading company in Indian Automobile sector which occupies prominent place due to its innovative Strategic Marketing, Promotional, Brand Positioning, Advertising Strategies. In today's scenario the success of company lies in structuring and restructuring the marketing strategies and continuous innovation of products and services.

The company is working on good profit and is giving good satisfaction to its customers which attract them to prefer only Maruti Suzuki as the brand they prefer. The entire analysis shows that people at maximum prefer Maruti Suzuki as a car for safety, comfort and the car which is available at affordable price to its customers and which also provides after sale services to its customers. This is the reason why Maruti Suzuki is a leading company in the market as well as the customer friendly car.

KUDUMBASHREE WOMEN'S BUSINESS EFFORTS THROUGH SOCIAL MEDIA: A CASE STUDY ON SOCIAL MEDIA MARKETING IN KERALA

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Abstract

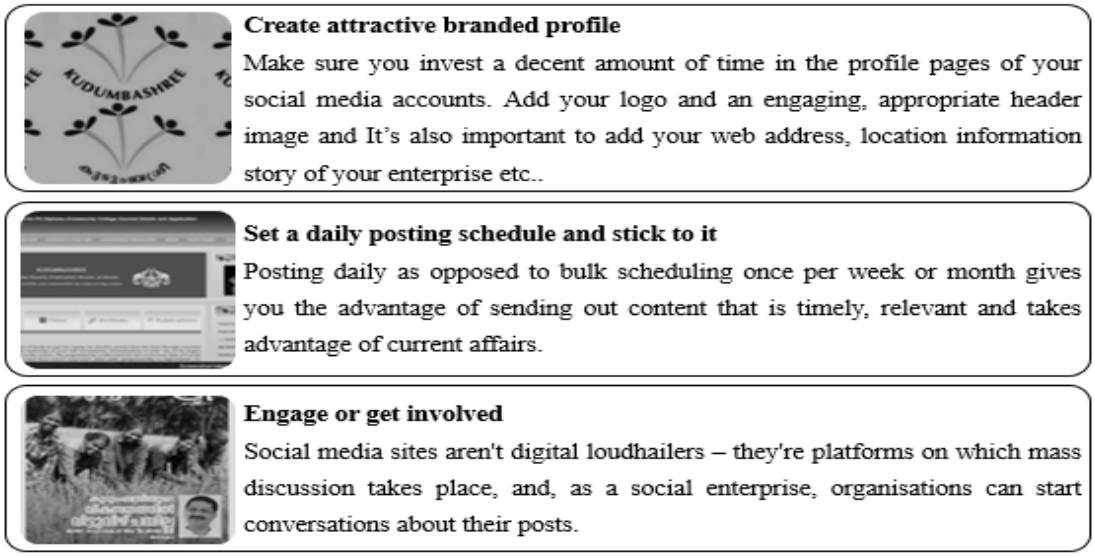
Social media podiums like Facebook, twitter etc. has gone over and done with many dissimilar epochs, starting from a website that was extremely baffling to use turn out to be a regnant social platform for memes, trolls, debates, polemic discussions and particularly for activism and business. In excess of these years, the world has observed numerous women hashtags triggering people in both online and offline backgrounds. Social media, generally Facebook and Twitter had grown into revolutionary transmutation space for women's expressions. The widely held hashtags and posts of women, which has been shared by millions were envisioned and designed for the cessation of women's silence. This study is aiming to analyze the viewpoint of the society towards Kudumbashree women's business efforts through social media. The study attempts to scrutinize the mentality of people of the most educated state of India, towards these business efforts campaigns.

Keywords

Social media campaigns, women entrepreneurship, women empowerment, social mentality, Kudumbashree, Facebook marketing.

Introduction

Social media marketing (SMM) represents technologies that target social networks and applications to promote an organization and create awareness about a product or a group of special products. Moreover, the marketing broadcasted by social media is believed to be more resilient, as they are commonly found in website links that are shared from trusted sources. Effective use of social media includes generating online comments, particularly product reviews by consumers which have serious effects on the business. In addition, this marketing method can also be used as an income generation medium for organizations. Many non-profit organizations and government organizations are also using this as a podium for their activities. Social networks like Facebook and Twitter usually notifies internet users, regarding a product of their interest based on their comments, shares, retweet, etc. The technology has its own relevance in business as it provides a group of "target audience". A Social media platform streamlines the marketing activities of a business by identifying their user's interests in seconds.



Source: Hub spot (2017-modified)

Fig.1: strategies for using social media for marketing organization or its products

Social Media and Kudumbashree

Kudumbashree is a model for third world countries for the eradication of poverty via women empowerment. The Mission aims at achieving the benefits of the various government programs and resources for the benefit of the bottom of the pyramid. Kudumbashree operations started in late 90's have crossed many milestones. The militant poverty eradication movement creates possibilities for social and economic development of the poor along with political empowerment and promotion of business capabilities of women. Such a movement can do many miracles with the social media marketing. In particular, it will be possible to highlight the achievements of Kudumbashree at various levels and at different aspects and it can incorporate new strategies to gain more attention from the users and non-users of mission through twitter or facebook marketing.

Major Electronic/Social Media Presence of Kudumbashree

1) Facebook: The main electronic media / social media used by Kudumbashree for communication is Facebook. Activities or ideas related to Kudumbasree or Ayalkoottam is conveyed to the general public through Facebook posts. Facebook is mainly used as a medium to convey novelty ideas or initiatives of Kudumbashree. Facebook News of Kudumbashree is getting support from the general public in the forms of like and shares. Though the mission is using Facebook for communication with the general public, their members are not using this media for marketing their products. Major Facebook pages of Kudumbashree are Kudumbashree sthreeshaksthi; district Kudumbashree facebook pages, Kudumbashree national resource organization.

2) Twitter: Twitter is another social/ electronic media used by Kudumbasree. Though Kudumbashree has the presence on Twitter, which is not using Twitter with its full potential like Kudumbashree-Facebook. But the mission made it possible to have its presence in this area as well. With the use of the Twitter account, Kudumbashree can still make changes among the people. Twitter id of Kudumbashree: Kudumbashree (@Kudumbashree)

3) Mobile application: Mobile phone application named 'Kudumbashree application' made for Kudumbashree members, developed by Tata Consulate Service in Hyderabad. They made this mobile application as part of their corporate social responsibility initiative. This was to ensure smart and effective communication of Kumbashree's Officers with its Ayalkoottam members. However, the truth is that Kudumbashree could not utilize the capacity, potential, and opportunities of these novel ideas effectively. Other major mobile applications for Kudumbashree members are ARC (Activity Report Compiler), and DFK Survey.

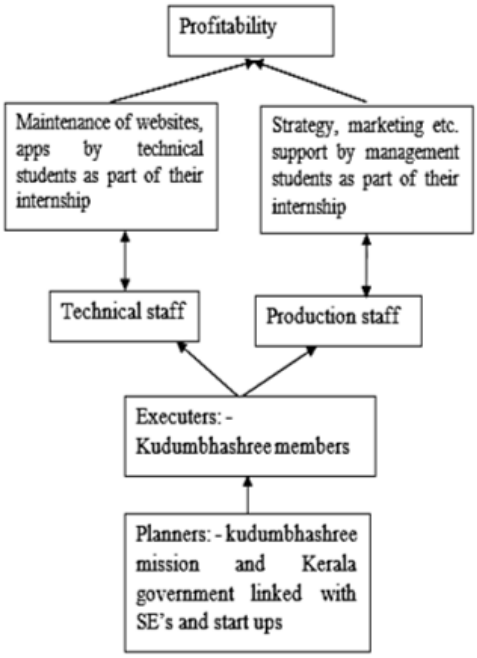
Kudumbashree Business Efforts through Social Media And Its Challenges

Most of the Kudumbashree members do not have much technical education or knowledge. Though Kudumbashree mission and district offices have active social media participation, their neighborhood groups are not having active participation in social media sites like Facebook / Twitter etc. In addition, the small business-owned neighborhoods are using typical marketing strategies to sell their products. The major business or marketing or selling strategies of Kudumbashree-Ayalkoottam are trade fairs, the festival based or weekly trade, direct marketing, and mouth publicity based selling. The reach of such practices are very less and makes diversification of Ayalkoottam businesses a big difficult one. Many well-organized neighborhood business group activities are shrunk to their locality only so it's high time for Kudumbashree to make sure the skill enrichment and enlargement of its members for diversification of business areas and presences. Through social media or electronic media, businesses diversification of Kudumbashree-Ayalkoottam will be possible.

Here the major significant role of mission is to make sure that the technical empowerment of members for adoption of these novel models. The major challenge for this technical empowerment strategy is its member's inability to comply with the technical education to adopt online / e-commerce models or social media marketing. So it is important for its members to know about the possibilities of technical / e-commerce and the business potential that can be developed through social media marketing. To make them capable of handling technology, mission has to arrange technical/computer training programs along with business training and development. Through the creation of skill repository of its members by each community development society (CDS). Once the mission could identify this, then subdivision of members as production and technical staff will easier.

The major significance of subdividing the Ayalkoottam members as technical and production staff is to help them for becoming masters of one skill. On the contrary, the members have to be divided into technical staff and production staff and organize training for the development based on their role. Here technical staff has to be trained in social media marketing and e-commerce and all. It is significant to teach them the mode usage of Facebook business pages, websites, and mobile applications. This can help them a lot for enhancing their business to other localities as well.

To make them technically empowered, Kudumbashree mission has to have a contract with start-ups or MNC's initially. By seeking benefits of corporate social initiatives of multinational companies for creation and maintenance of mobile applications or social media sites to enrich Ayalkoottam businesses. Such a state, by having tie-ups with start-ups or multi-national companies can help Kudumbashree business groups to create and maintain mobile applications or full-fledged webpage or Facebook page along with technical education development programs.



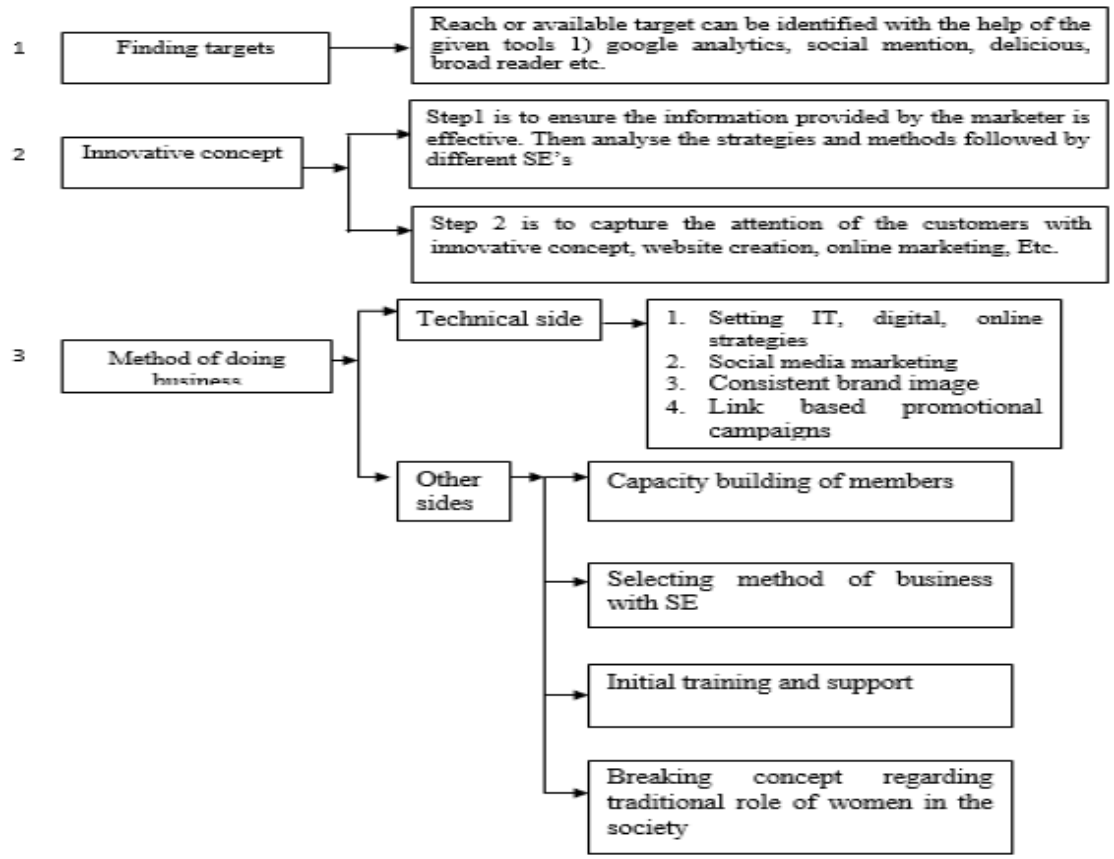
- Kudumbashree mission should subdivide the total members of each unit into two groups (production and technical staff) based on their skills, abilities and education. Then provide better training to members to make them capable of doing activities effectively.
- Secondly, mission will be easier to move forward by adding social enterprises and the MNC's or start-ups.
- With the Help established social enterprises in training programs related with marketing and funding creation, and the help of start-ups for training of services such as website creation and mobile app creation trainings, Kudumbashree can move further.
- Additionally, the services of management and engineering students doing final year projects with Kudumbashree units will be able to move forward to the mission unlike today's model.

Source: Kuniyath, J. K., & Sankaranarayanan, K. C (2017)

Fig. 2. Model base for technical training and business

Though there is a scope for Facebook or social media presents for Ayalkoottam members for their business, there are many other things as well need to be considered while entering in to these mode of modern business. First of all the units has to take steps for identifying their target audience. Once they could identify their targeted

audience of world wide, then should make sure that they have an innovative idea or product for business. Another significant aspect of such social media businesses are method of doing business. Here Kudumbashree mission has to make skill repository and should subdivide the business unit members as technical and production staff. Then training and development has to be done for improvising technical and other side.



Source: Kuniyath, J. K., & Sankaranarayanan, K. C (2017)

Fig. 3. Factors need to be considered by Kudumbashree mission for social media involvement

Conclusion

Necessitude of resurrecting Kudumbashree to envisage the conceptions and conditions of future generation should also be estimated by Kudumbashree mission and units. By adapting and permitting opportunities to start-up's and students, NC's, Kudumbashree can make numerous achievements. Currently, the actions and activities of Kudumbashree are limited to just for satisfying the followers of Ayalkoottam (NHGs) and its nearby dwellings. To snatch the extensive chances, chances Kudumbashree mission should prepare its members to cope with worldwide opponents'. Accepting novel approaches to business with experts and with sophisticated skills, Kudumbashree mission can make straighter and ancillary job

openings. This will allow the Kudumbashree mission to employ further resources and enhance the pace of economic growth of the state.

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DIGITALISED EDUCATIONAL SERVICES IN INDIA: A CASE STUDY ON BYJUS LEARNING APP

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Abstract

Education sector in India has long awaited on overhaul to meet the growing demand for a contemporary education system that is accessible to all. Children and youh in the last decade became increasingly technology-driven, revealing considerable potential and readiness to imbibe and learn using digital media. Byju's learning app is the front runner in digitizing education in India. The main objective is to find out firstly to understand is digitalization of education a boon or bane to education sector and secondly does the new generation want change in existing teaching methods influenced by digitization. The data is collected from the primary and secondary sources. The primary data is collected using structured questionnaires from 100 respondents in the age group of 18-21. The results highlight that the digitization is a boon and young generation is open for changes in teaching methodology at school level. Digitization could fill in the gap between the demand and supply side of teaching in schooling

Keywords

Digital Education, Teaching, Youth, Byju's learning app

1. Introduction

India holds an important place in the global education industry. The country has more than 1.5 million schools with over 260 million students enrolled and about 751 universities and 35,539 colleges. India has one of the largest higher education systems in the world. However, there is still a lot of potential for further development in the education system. India has become the second largest market for e-learning after the US. The sector is currently pegged at US$ 2 billion and is expected to reach US$ 5.7 billion by 2020. The distance education market in India is expected to grow at a Compound Annual Growth Rate (CAGR) of around 11 per cent during 2016-2020. Moreover, the aim of the government to raise its current gross enrolment ratio to 30 per cent by 2020 will also boost the growth of the distance education in India.

The Indian education system has a great opportunity to go digital, thereby leapfrogging the progress in education that other countries have done. Over the past 8-9 years, Indian schools and students have demonstrated that their ability to adapt to digital technology is no less than anybody else in the world. It is a fact that today many private schools in India which use products like Smart class are way ahead of the technology adoption curve than many other schools in the US, Singapore and even Japan. There is a great opportunity in front of us to take e-education and spread

it across the country. The advantages are quite obvious. With one stroke, we will be able to deal with the critical teacher shortage problem and also the teacher quality problem. We will also be able to make education contextualized, localized, relevant and consistent across the country. We can see there is a lot of development in our society from past few years. In this short period there are many changes that has taken place. In this background the main objective of the study is to find

- Digitalization is a boon or bane to education sector
- Does the young generation want some change in teaching system

2 Review of literature

Jinal Jani and Girish Tere (2015) Digital India programme introduced by government of India is important for the development of digital education in the country. Digital India drive is a project initiated by Government of India for creation of digital empowered society across the country. It will help in mobilizing the capability of information technology across government departments and helps in delivering the different governments programs and services. Digital India will help in creating job, providing high speed internet and digital locker system and so forth. Digital India has three important components namely digital infrastructures creation, digital delivering services and resources and digital education. **Shikha Dua et al., (2015)**. They have discussed the different issues, trends and challenges of digital education in India and suggested the empowering innovative classroom model for learning. The future trend of digital education includes digitalized classroom, video based learning, and game based learning and so forth. They have pointed out different challenges of digital education India and suggested measures to overcome these challenges. Constant reforms required in schools and teacher for the development of digital education in India. **Himakshi Goswami (2016)** The study highlighted the different opportunities and challenges of digital India programme in India. Digital India programme introduced by government of India will help in transforming country into a digitally empowered economy. This will help government of India to integrate the Government Departments with the people of India. The main purpose of this programme is to reduce the paper work and help in providing different Government services electronically to citizens. It describes the different opportunities of the programme for the people of the country. India is having different languages, culture, and customs, food habits, laws and traditions. The purpose of digital India programme is to integrate whole country digitally but languages would be the main challenges in the implementation of such programme. **Jayesh M. Patel (2017)**.There are many web based tools which can be used in the classroom for digital education like twitter, Glogster, Prezi, Diigo, Dropbox, and Moodle. Teachers and students are interested in web based digital learning but because of lack of knowledge they are not initiating the same. Web based tools will make the learning interesting and students will get motivated which normal classroom cannot do. Currently the teacher centric approaches are making learning boring even for interesting chapters, use of digital technology makes

even boring content interesting and joyful. The concept of child centered approach will be fulfilled only with the help of digital technology.

3 Research Methodology

To study the problem under consideration we selected 100 respondents as sample from the engineering students of colleges at Bangalore, India. We used the random sampling method to identify the sample. We used statistical descriptive method to explain the results of the study such as percentage analysis, weighted average etc.

4 Results and Discussions

Some of the major challenges for digital education in India are:

- **Resource and internet connectivity related challenges**

  One of the main challenges for digital education in India is poor internet connectivity in rural areas and some part of urban areas. Majority of population across India has still no access to internet and a large population in rural areas is still illiterate in the field of digital technology. More Innovations required to make the digital education more interactive and robust.

- **Shortage of trained teachers**

  A major obstacle in the use of digital education in rural area is the lack of knowledge and skills. There is a shortage of teachers, formally trained on digital technology. In some of the academic institution in rural areas, school teacher and college professors are not interested in using digital tools for conducting classes. They feel that a lot of information is explained to the students at one go through the digital medium and they prefer traditional teaching methods of chalk and blackboard. In rural areas, primary teachers and senior teachers are reluctant to get trained and adopt digital technologies for digital education in school because they are in view that these disruptive technologies are out to replace them permanently.

- **Language and content related Challenge**

  Languages is one of the main barriers for the development of digital education in India, there are several different languages in different state have been spoken all across country, pushing all the digital content in all these regional languages some time becomes difficult for the agencies.

- **Poor maintenance and upgradation of digital equipment**

  In rural areas maintenance and upgradation of digital equipment is one of the major challenge. This is largely due to budgetary constraints by government. The digital education projects in rural schools are not self-sustainable. At initial stage various projects have been launched by government for the development of digital education, but later, they have not been taken due care for the maintenance of digital equipment which is affecting the digital education development in rural areas.

- **Insufficient funds**

Digital education involves effective and efficient usage of appropriate and latest hardware and software technology available in the market. In developing countries like India, digital technology implementation into education systems is a difficult task as it requires huge funds and infrastructure. Through Digital India programme, the government has promised availability of funds for technology implementation but lack or insufficiency of finances leads to redundant and obsolete infrastructure and equipment's in rural schools.

It is clear that most of the respondents for the study are school students, about 56% of the respondents are comprised of them. It is revealed from the study that most of the respondents had expectation about the sudden growth in educational industry.74% of the respondents gave positive response and only 26% were disagreeing this. About 54% agree that the educational system is updated and this shows that people are aware about the digitalization and online educational system. Its seen that respondents have different experiences of using digital learning like easy understanding, convenience, etc, but most of them are in opinion that digital learning helps in time saving but it helps less in cost saving. About 86% of the respondents think digitalization is required in educational sector and most of them are in opinion that the step taken towards digitalization is a positive sine.

The education sector in India is making rapid strides towards providing quality education. Technology has made imparting education stress-free for both students and educators. Schools are gradually implementing digital teaching solutions to involve with a generation of learners familiar with the likes of PlayStations and iPads and trying to make the classroom atmosphere more broad and participatory. Information and communication technology in education has facilitated student understanding, students are perhaps the readiest and exposed to external education but they are in the best situation to absorb what comes up in the classroom.

Currently students live in a world that is constantly linked and alive outside the class room, so traditional methods won't work now. The true revolution in education can only be achieved via digitization of education so that students can learn at their own speed both within and outside the classroom. Their learning upgrades while they carry on to advantage from fostering, mentorship and direction of their teachers.

This study helped us lot to understand the current educational system in India and Global world and also how technology has made a rapid change and development in the field of educational industry. Also, we would like to conclude that digitalization is indeed an essential development in a country.

The study on the pros and cons of digitization of education system we found that:

- **Time:** One good thing about digitization is the amount of time it saves – in any field. Digitization of admissions can save lot of the time to the decision makers of the process. So, does the digitization of institute searching. Communication also becomes easier between the students, teachers and parent
- **Scope of knowledge:** Digitization provides the system a better scope to grow up and move ahead. Imagine digital class rooms with internet availability. Learning gets deeper, due to the availability of platforms like Wikipedia, google etc.
- **Lesser burden:** Remember those kilograms of weight we used to carry to schools, digitization can reduce this burden and the students can happily go to their schools with joy.
- **Tech-teaching:** Which has a greater impact on students – a paragraph about solar system or a video showing solar system and its features? Definitely the latter. We human beings remember better when we are shown something. So, explaining things by showing them through videos and graphics has a better.
- B**etter choice:** When it comes to choosing of universities and branches, digitization provides an ease to choose better. It's also easy to know opinions of other students and parents. Getting connected to alumni and knowing their opinions is also easy. Unlike olden days, it is easier to know if there is anything wrong!

The major ill-effects of digitization

- **Side-effects on health:** Yes, continuous staring over laptops has a direct bad impact on eyes and indirect impact on brain and focus levels, say numerous doctors. So, may be complete replacement of books by tabs and black boards by projectors isn't a very good idea.
- **Disturbed teaching system:** The new teacher in the form of google and Wikipedia might disturb the usual way of teaching. Teachers are considered demi-gods in most nations and are treated with utmost respect as the epitome of knowledge. Availability of internet might disturb this format. Age-old format of classroom interactions might also get disturbed. Teachers might turn out to be just employees of the institute. Not to forget, an intelligent teacher can use internet to teach in a better way.
- **Misused internet:** There are more chances of the available access to inter-web being misused by the students. Proper restrictions might be able to put a check on this.

  So, whatever be the pros and cons, the future clearly indicates a digitized education system. Better its implementation, better is going to be the future. Consideration of all the possible cons and thinking of a solution is more important than anything else.

5 Conclusion

Education sector in India has seen a series of rapid expansion in last couple of years which helped to transform the country into a knowledge haven. The study clearly

points that development of education infrastructure is required for the development of digital education across the country. This will lead to considerable increase in infrastructure investment in the education sector. Democratic governance, English speaking tech-educated talent and a strong legal and intellectual property protection framework are required for the development of digital education in Indian society. Government of India has also taken major Initiatives for the development of digital education in India like opening of IIT's and IIM's in new locations as well as allocating educational grants for research scholars in most government institutions. As per the Union Budget 2016-17, 10 public and 10 private educational institutions to be made world-class, Digital Repository for all school leaving certificates and diplomas. Rs 1,700 crore (US$ 250 million) allocated for 1500 multi-skill development centres.62 new Jawahar Navodaya Vidyalayas (JNV) to provide quality digital education. Digital literacy scheme to be launched for covering six crore additional rural households.

The Government of India has further announced plans to digitize academic records such as degrees, diplomas, mark sheets, migration certificate, skill certificate, etc. from secondary to tertiary-level institutions into a National Academic Depository (NAD). The study highlighted the different challenges of digital education in India. Government of India needs to take the required measures to overcome these challenges for the development of digital education in India.

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PEOPLES' PERCEPTIONS TOWARDS THE DIGITIZATION OF FINANCIAL SERVICES – EXPLORING VIEWS IN EDAPPAL PANCHAYAT

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Abstract

The sudden decision by Prime Minister Narendra Modi to demonetize notes of higher denominations and change the track of the economy to a cashless mode set off a chain of events which brought forth a number of changes in the economy. In addition to dragging down the growth of the economy, the policy caused multiple problems to the agricultural sector, small industries, service sector and the large chunk of unorganized sector in India. The current study tries to analyse the people's perceptions towards the policy of digitization, as well as their preferences with regard to mode of transactions. The study incorporates 100 households from Edappal Panchayat in Malappuram district. The study has revealed that people are still hesitant to using cashless methods of transactions, while they are also unaware of the different methods of cashless transactions. It can be concluded that renewed efforts must be undertaken to ensure that this uncertainty is sorted out so that digitization may take off in the future.

Keywords

Digital economy, cashless transactions, modern banking services

The decision to demonetize currency notes of high denomination, i.e. Rs. 500 and Rs. 1000, announced arbitrarily by Prime Minister Narendra Modi on 8th November 2016, has been perceived to be a point of contention in recent times. The decision, initially advertised as being a crusade against black money, corruption and the parallel economy of the country, swiftly gave way to claims of rapid digitization, with the Government facing heat from various corners for its apparently short sighted and flawed policy measure. The decision to sway the primarily cash-based economy of India to a cashless mode was followed by steps such as announcement of incentives for encouraging cashless transactions, massive advertisement campaigns featuring the Prime Minister, and the outing of a slew of digital transaction applications such as the BHIM app.

Although it can be claimed that the aim of digitizing the economy holds much scope in India given the sheer size of the country geographically and the burgeoning population, the existing scenario is not very conducive

for such a step. Indeed, moving away from a traditional cash-based economy to a cashless one has not been a smooth ride for the country. Prior to demonetization, nearly 86 per cent of financial transactions in India were being carried out using cash, and prompting a tectonic shift in this trend is a nearly impossible task. In the financial quarters following demonetization and digitization, the country's growth rate had plummeted dramatically to 5.7 per cent, while indices such as the agricultural production index and industrial production index have also tanked.

Although the demonetization and digitization drives were claimed to crack down hard on the black economy, these claims have fallen flat on their faces. Liquid cash constitutes only a small percentage of the black economy in the country, with black money mostly held in the form of bullion or real estate. Black money has been laundered in many ways by such individuals. Small businesses have broken down considerably in the last one year, while some who enthusiastically jumped onto the digital bandwagon inevitably dropped out due to a lack of public interest. There was a shortage of proper planning when implementing the policy, including a delay in calibrating ATMs, dispensing notes of lower denominations, etc. Limits on withdrawal of currency from the commercial banks also hit the people hard. Common people were left frustrated by the sudden decision to shift the traditional methods of financial transactions.

I. Objectives of the Study

The study was carried out with the following objectives in mind:

1) Assess the people's knowledge about digital payment measures
2) Examine people's perceptions towards the usage of various digital transaction methods
3) Assess the people's level of financial literacy

II. Data and Methodology

The study was carried out in Edappal panchayat of Malappuram District using a sample survey. The sample of 100 households were selected at random using the simple random sampling method. The focus of the current study was to know how the people perceived the move of the economy to a digital one, and understand whether they were confident enough about this shift. One hundred households in the panchayat were sampled for the study, with their perceptions taken on the favoured method of transaction, as well as knowledge regarding various methods of financial transaction. As part of the study, the financial literacy of the respondents was also taken into account.

III. Results and Discussion

As part of the study, the respondents were asked about the status of financial inclusion, knowledge regarding various methods of digital transaction, and their perceptions towards the use of such digital payment methods. The study showed that of the 100 households in the sample, 93 have their own bank accounts. The respondents were also asked about the reason which prompted them to open the bank accounts. A

majority of them (67.74 per cent) reported that bank accounts were opened and operated for the purpose of domestic savings. About 15 per cent reported that they operate the bank account for the purpose of availing loans from the bank, while another 12 per cent use it to claim the benefits of Governmental schemes and social security measures. The figures for this are shown below in table 1.

Table 1: Reasons for Opening and Operating a Commercial Bank Account

Reason	**No. of Respondents**	**Percentage Share**
Loans	14	15.05%
Domestic Savings	63	67.74%
Govt. Subsidies	5	5.37%
Other	11	11.82%
Total	*93*	*100%*

Source: Primary Data

Regarding familiarity with various techniques of financial transactions, a majority of the people were found to be familiar with using ATMs for withdrawing money. 80.17% of the people use 5

ATM. 12.06%of the respondents are familiar with mobile banking techniques, while 3.44% respondents are familiar with internet banking technique. Only 3 people use Tele banking technique in the sample. Electronic Fund Transfers (EFTs) are the least familiar service to the respondents, used only by 2 out of 100 respondents. The following table shows the details regarding the familiarity of respondents in using various banking techniques.

Table 2: Familiarity with Banking Techniques

Banking Technique	**No. of Respondents**	**Percentage of Respondents**
ATM	93	80.17%
Tele Banking	3	2.58%
Internet Banking	4	3.44%
Mobile	14	12.06%
EFT	2	1.72%
Total	*116*	*100%*

The respondents were asked how often they used their Debit/ATM cards for making transactions or withdrawing money. Individuals who owned a card yet never used it before constituted 40 per cent of the sample. 25 per cent of the respondents frequently used their cards for making transactions, while 35 per cent sometimes

used their cards for transactions. Table 3 shows the figures for frequency of card usage among the sample households.

Table 3: Frequency of ATM/Debit Card Usage

Usage Status	No. of respondents	Percentage of respondents
Frequently	25	25%
Sometimes	35	35%
Never	40	40%
Total	*100*	*100%*

In conjunction with this data, one can also analyse whether the respondents know the difference between credit and debit cards. It was seen that only 28 per cent of the respondents knew the difference between the two. An overwhelming majority (72 per cent) did not know how to differentiate between a credit and debit card.

When asked whether they preferred cashless transactions to paying in cash, a large number of respondents (76 per cent) preferred using cash. Only 24 per cent of the sample respondents reported preferring cashless mode for making financial transactions. This data can be tied in with the people's confidence in dealing with various financial services. These services include using credit cards, debit cards, bank deposits, availing bank loans, using cheques, internet banking techniques, and stock market investments.

Only 7 out of 100 respondents were found to be very confident in dealing with credit cards. 63% were not confident and 30% of the respondents did not know how to deal with the credit card. 37% of the total respondents were very much confident in dealing with debit card. 28% of the respondents were somewhat confident while 29% of the respondents were not confident and the remaining 6% respondents did not know to deal with debit card. In case of bank deposit, 78% of the respondents were very confident while 16% of the respondents were somewhat confident and 5% belong to the not confident category and the remaining 1% belonged to the do not know category.

In dealing with Bank loan, 46% of the respondents are very confident and 37% of the respondents are somewhat confident and 14% of the respondents are not confident and the remaining 3% of respondents have no idea about this. Around 70% of the respondents are very confident about dealing with Cheque and 18% stated that they are somewhat confident.10% of the respondents are not confident and the remaining 2% have no idea about Cheque. In case of Stock Market only 5% of the respondents are very confident and 6% are somewhat confident and 66% of the respondents are not confident and 23% of the people have no idea about how to deal with the stock market.

32% of the respondents belong to the Very confident category while dealing with

Insurance and 31% are confident to a certain extent. 28% of the respondents are not confident and 9% respondents do not know to use the Insurance services. While coming to the Internet Banking only 9% are confident enough to deal with them and 17% among the respondents are somewhat confident. 64% of the respondents are not confident and 10% have no knowledge about Internet Banking. Respondents who are very confident in dealing with Consumer Right services are just 21%. 55% of the respondents are confident to a certain extent and 18% among the respondents have no confidence and the remaining 6% do not have an idea about this.

Table 4: Confidence in dealing with Various Financial Services

Financial Service		Very Confident	Somewhat Confident		Not Confident		Do not Know		Total	
No.	%	No.	%	No.	%	No.		%	No.	%
Credit Card	7	7%	0	0	63	63%	30	30%	100	100%
Debit Card	37	37%	28	28%	29	29%	6	6%	100	100%
Bank Deposit	78	78%	16	16%	5	5%	1	1%	100	100%
Bank Loan	46	46%	37	37%	14	14%	3	3%	100	100%
Cheque	70	70%	18	18%	10	10%	2	2%	100	100%
Stock Market	5	5%	6	6%	66	66%	23	23%	100	100%
Insurance	32	32%	31	31%	28	28%	9	9%	100	100%
Internet Banking	9	9%	17	17%	64	64%	10	10%	100	100%
Consumer Rights	21	21%	55	55%	18	18%	6	6%	100	100%

Source: Primary Data

As part of the study, respondents were asked whether they wished to increase their level of financial literacy. People listed a number of methods to raise their knowledge about financial services, such as through friends, awareness programmes, relatives, job experience, etc. This data is given below in table 5. It can be seen that the largest share of respondents, nearly 42 per cent, opted to using media and books to raise their level of financial literacy, while the next highest category, opined that they would be better off learning from their own life experiences. It must also be noted nearly 18 per cent said that they would prefer learning it from friends and relatives.

Table 5: People's Opinion on Raising the Financial Literacy

Medium	No. of respondents	Percentage of respondents
Friends	9	10.46%
Awareness Programs	8	9.30%
Educational Institutions	3	3.5%
Media and Books	36	41.86%
Financial Institutions	11	12.79%
Life experience	12	13.95%
Job	1	1.16%
Relatives	6	6.97%
Total	*86*	*100%*

IV. Conclusions

The study has revealed that a majority of respondents still prefer to make their transactions in cash rather than go digital. A vast majority also are unable to differentiate between various methods of digital payments, while they were also generally wary of using credit cards as a 9 medium of transaction. Although an overwhelming majority of respondents have bank accounts, very few have caught up with changing times, with the use of mobile banking and internet banking being very low among sample households. Only a relatively small number admitted to using their credit/debit cards frequently to make financial transactions.

It can thus be concluded that the people in rural areas are in general apprehensive about the dramatic shift to a digital economy. Their fears have to be taken into consideration, and necessary steps taken to raise their awareness about modern methods of financial transaction before such sweeping measures are brought into the economy.

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STUDY ON HEALTH STATUS OF KERALA AND THE ROLE OF DIGITAL HEALTH CARE SERVICES IN MAINTAINING HEALTH OF PEOPLE

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Abstract

Kerala is one of the most socially advanced states in India rich in population, literacy rate, education, industrial development, culture, more developing cities etc. Kerala is regarded as the model of growth in various aspects. In the fast growing trend of the economy, the people spend a huge amount on health expenses to prevent them from communicable ad non communicable diseases and life style diseases. In this context the researcher is intended to study the health status of people in Kerala and the role of digital health care services in maintaining the health of people. We are experiencing an era of digitally driven innovation. Technologies have developed and will change how we provide healthcare network to people. It may throw light on decision makers to take decision on the impact of the digital health care institutions in providing health care services.

Keywords

Industrial development, Communicable and non communicable diseases, Health status, Digital Health care services.

Introduction

Kerala has a long history of organized health care. In 1956, it laid the foundation for a sound health care system. After that there was a remarkable growth and expansion of government health services. To have good health standards in Kerala, high level of education and greater health consciousness played a significant role. Today with the mushrooming of private hospitals that offer quality services, matching international standards and with the tie up of the health care industry with the tourism sector, health care in Kerala is growing by leaps and bounds (Soman, 2007). In the expansion of health care facilities, state government plays an active role. Kerala is famous for its model of 'Good Health at Low cost' and it is achieved through universal availability, accessibility and performance of government healthcare delivery system, that is they render such services even to poorer sections of the society. According to the Human Development Report Kerala placed on top of all other states in India, because of easy accessibility and coverage of medical care facilities. A lot of transformation and innovation is there in health care industry. It is growing at a steady pace and is expected to be US $ 280 billion

by 2020as a result of growing incomes and rise in elderly population. It is moving ahead and is a recognized sector just like software and pharmaceutical industry. Indian hospitals are gaining reputation globally as "quality" service providers and many Indian hospitals have secured accreditation in this regard. People from other nation opt India as a preferred medical destination. Private players play a major role in the provision of treatments as they are financially stronger and well managed. The impact of New Economic policy and ICT especially internet played a major role in accessing the health care services to a great extent. Health care is the prevention, treatment, and management of illness and the preservation of mental and physical well-being of people. Non –communicable diseases (NCDs) as a result of change in food habits, sedentary behaviour and unhealthy life styles have become a growing threat to global health.

Imagine each of us having our personal health record (PHR) that can be accessed and updated by our doctor. At the time of consultation, the doctor enters our important health issues in the PHR. Computer software generate a test calendar displaying overdue tests and upcoming tests based on the doctor's information and other relevant personal variables and details. It may sound like futuristic, but the State government is all set to roll out its e-Health project.

Literature Review

Chattarjee (2002) argued that there are large number of factors which promote the growth of the health care institutions in private sectors in India, there are equally a large number of factors, which frustrate the growth of the private health care institutions in India. Hence efforts are being made to see reasons and allow the private sector health care institutions to grow in the interest of the community. The rate at which the current population is being affected by diverse diseases, it will be essential that the total load of treatment be shared both by public and private sector health institutions in future.

Nabae (1997) in his article has analyzed the past accomplishment and new challenges faced by the health care system in Kerala. He also suggests some measures to overcome the challenges faced by the public sector over the private sector.. He suggests that, Kerala must invest in the public sector to revitalize the system. To achieve this, tax revenue must be increased. Second, Kerala must streamline the system through decentralization. Third, Kerala must take a step to revamp the health care system in a way that the public and private sectors effectively co- operate and complement each other to meet the needs of the people.

Dilip (2008) tries to understand the characteristics of private hospitals and their equity in assessing their services, using secondary data available for the period 1986-2004. The data indicates that private hospitals did not expand in numbers but a strong consolidation by large hospitals has taken place .Public policy favoring increased private sector participation in medical education coupled with opening of super specialty hospitals has led to a situation where small hospitals or nursing homes are losing their significance and a large number

of them have been phased out .Analysis also shows that the duration of hospitalization is lesser if treated in a private hospitals than in a government hospital and that the charity component in the so called " charitable hospitals" is disappearing.

Kunchikannan and Aravindan (1999) aims to link the socio –economic and health status of the Kerala state. The study followed up a sample of households surveyed in 1987and conducted a repeat survey of their health and socio economic status in 1996.

Panikar (2004) in his special article had examined the achievements of Kerala in the health field. His primary focus is on the rural population, who generally constitute the predominant majority. The conclusion to which this case study leads is that given proper policies and priorities, lack of resources need not be an impediment to improve health status even in low income countries.

Gangadharan (2007) have examined the success indicators of health in Kerala with that of the national health and the issues connected with the health care investments and morbidity prevalence in Kerala. The study has great relevance in the present socio economic and environmental contest. The state Kerala which has been considered as a state with advanced human development index and better health status is now ailing from acute morbidities of different communicable and chronic illness. Since high morbidity prevalence in the basic issue of the Kerala's health sector, greater attention is needed to reduce the intensity morbidity prevalence private health care can only be a complementary to public institution and not as a substitute to achieve health for all at least in the near future. To attain the status of health for all, aged population has to be properly rehabilitated and efforts should be made to augment the utilization of health services among the marginal deprived and venerable sections of the society. Moreover there should be better of safe drinking water sanitation and utmost care should be provided for better environmental cleaners both in the urban and rural areas. .

Raman Kutty V. (2000) analyzed the development of healthcare facilities in Kerala state. He observed that health sector spending continued to grow even after 1980 when generally the fiscal deficit in the state budget was growing and government was looking for ways to control expenditure

Gupta Indrani and Arindam Datta (2003) examined the inequities in health and health care in India using data from 52nd Round of National Sample Survey Organization. The study indicated that the poor had much higher levels of mortality, malnutrition and fertility than the rich. They found that the poorer households especially in rural areas, bore the greatest brunt of acute illnesses and spent more on acute illnesses compared to the richer households.

George Asish Thomas (2005), in his study based on NSSO 55th round data found that a high percentage of the population in Kerala spent a substantial amount of its monthly income on health care. The study confirmed that Keralites spent a disproportionate share of their total expenditure on health and the poor in the state bore a larger share of this increasing

health expenditure. This goes quite against the egalitarian tradition of the state. It is the poor who are more vulnerable to ill health. Given Kerala‟s growing unregulated private health sector and the limited coverage by public health care, there is a need to have „good health at low cost‟.

Economic Research Foundation conducted a benchmark study on government health expenditure in India (2006) and examined the actual pattern of government spending on health by both central and state governments for 14 major states in India. The study found that absolute levels of total government spending on health, family welfare and child development were absurdly low by international standards. The study revealed that government spending on health amounted to less than 1 per cent of GDP, which meant that a disproportionately large and growing share of the burden of health care was borne by households in the form of out-of- pocket expenses. The central government accounted for roughly one-third of total government expenditure on health, on an average 0.35 per cent of GDP over the past decade. The analysis of state budgets indicated wide variations in health spending across states; it also indicated wide and growing rural- urban disparities in most states. Across states, the per capita spending was found to be strongly correlated with various health indicators.

Objective of the Study

- *To study the health status of people in Kerala
- To study the role of digital health care services in maintaining the health of people.

Methodology

The present study is descriptive in nature and used secondary data .Data is collected from published records, journals and articles.

An Over View - To scale up efficiency

Given the expanded health-care facilities and institutions existing in the State in the private and public sectors, the emerging application of e-Health IT platform to enable the delivery of a digital health-care solution and services connecting patients, doctors, and hospitals is expected to scale up the efficiency of treatments and hearth record mechanism. Experts in the information technology and health-care sectors hope that the health-care system in the State is set to witness radical changes once the IT solutions and services driving the health recording system take over the existing mechanism. The State government's e-Health project, covering the entire population, is viewed as a step in that direction.

E-Health Record

"The e-Health programme envisaging an electronic health record mechanism covering the total population in the State is now in its trial phase," said N. Sreedhar, Additional Project Director of the e-Health project. Work is now on to form users' groups, including health personnel, Dr. Sreedhar said adding that it will cover over 1,200 health-care delivery facilities, including public and community health-care centres, general hospitals, and medical college hospitals. The start-ups offering online electronic medical record system empowering doctors and patients are expected to cover private

hospitals and clinics. They envisage creation of patient data that provide the doctor with a patient's relevant health information vital for evaluation of risks and deciding treatment. "Every bit of information concerning a patient's health should be entered so that the doctor can evaluate it in the context of its previous values and other data," said Anand S. Nair, Director of the Thiruvanthapuram-based Watch MyHealth, which offers IT solution and services to collect and maintain complete health information of patients. Sooner or later IT health services will replace the existing manual system, said Mr. Nair, engineer having expertise in the IT sector and a retired Army officer. e-Health system, its promoters say, also encourages patients to carry out periodical tests and participate with their doctors in the treatment process. Access to up-to-date patient data ensures accurate clinical assessment, they point out.

Current Trends

The eight industry leading trends in digital healthcare services

Medication Adherence …gets a boost from sensor tech- the basics of digital adherence will receive a boost from the use of sensors to collect confirming data through breath analysis, urine sampling, or another non-invasive method.

Talking to Technology: Conversational interfaces go mainstream- The conversational user interface — driven by advances in voice recognition technology in conjunction with artificial intelligence, capable of understanding the content and context of patient concerns.

Predicting Health: Analytics debut for patients and clinicians, not just payers - Software tools for visualizing a patient's complete range of health metrics, along with clinically validated algorithms for scoring a view of patient health data based on factors like age and gender.

Disease Detection …on your smart phone- a disease detection model that is personally meaningful and changes behaviour.

Digital Care Planning: It's how to get better patient outcomes in a tech driven world- a plan for case management and rehabilitation, psychological health, exercise, nutrition, birth / sexual health, and advance care / death.

Computable Records: The next generation of the EMR conversation- a patient's entire record from conception to death

Patient Engagement: Most care is self care- 99% of healthcare is self care and it includes software like digital coaching and coordinated outpatient education which provide the right information to patients outside the clinical environment, especially for mental health.

Virtual Helpers: The digital health companion in your pocket- provides both health coaching and resources to motivate patients.

Kerala has been at the forefront as far as health standard of people are concerned. The Kerala has a high morbidity rate but a lower mortality rate paradox. Health system has to meet its challenge only by being effective and efficient. And we also have the advantage of better human resources in numbers and skills in comparison to other states. eHealth is a very ambitious project that

is appropriately approved and sanctioned by the ministry of information technology. Essentially, it has got two parts EHR (Electronic Health Record) and EMR (Electronic Medical Record). The EHR is population based record and EMR is episodic based record.

Conclusion

In the area of health care, Kerala has strong fundamentals in terms of institutional support and the people in the state have high health seeking behavior. The health is an important area in Kerala because people have attached lots of importance to health consciousness. They don't neglect their own health. And government is also extremely active about the health of masses, therefore have spent a good amount of money on health.

There has been an increase of 58% in plan outlay. An amount of 445 crores was incurred on health during 2010-11 and that rose to 665 crores in 2013-14, with an increase of 15 to 16 percent every year. That is considerably 7 to 8 percent annually for other states of India in comparison.

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INFLUENCE OF DIGITAL ECONOMY ON MODE OF TRANSPORTATION: A CASE OF ELECTRIC CAR

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Abstract

Automobile is one of the largest industries in the global market owing to its strong forward and backward linkages with several key segments of the economy. A well-developed transportation system plays a key role in the development of an economy, and India is not an exception to it. The automobile industry, along with the auto components industry, is one of the core industries in India. Digital economy with its influence of Information and communication technology is influencing the automobile industry as well. The fuel efficient and environmental friendly electric cars have started influencing the automobile industry in India as well. The objective of the paper is to understand the demand determinants of electric cars in India . Secondly to assess does the environmental awareness is influencing the car selection among young customers .The study use both primary and secondary data .The primary data is collected from 100 four wheeler users within the age group of 21 -40 years .The study shows that increasing fuel prices are influencing young users to move to electric cars as well as environmental awareness could increase the demand for electric cars.

Keywords

Electric cars, Environmental awareness, demand, Customers.

1. Introduction

Possibilities and challenges Influence of digital economy on mode of transportation in the world and India phenomenal. The government by defining the regulations on emissions and fuel efficiency, clarifying aspirations, strategic intent and direction, exploring incentives and subsidies, it can support EV adoption and focus on developing a supportive ecosystem. By laying down a foundation of support, innovating on business models (e.g., leasing of batteries, swapping infrastructure, deploying fast chargers), making the economics of (fast) charging infrastructure work, providing stable power supply and grid stability, they can enable easy and rapid charging and drive EV adoption. The automotive industry: By changing the product and component mix bringing EV components and vehicles to life, building the right talent pool and skill set, improving the performance of batteries and electric vehicles and building scale, the industry can drive the EV disruption in India. Regulations and incentives: Many countries have promoted e-mobility through a range of incentives, but these alone did not drive EV penetration. A supportive ecosystem that also establishes strict regulations on

carbon emissions and regulations driven by strategic intent (e.g., reduce current account deficit and geographic dependence driven by crude oil) indirectly prompts the higher adoption of EVs. Technology: As a large component of the overall EV costs, high battery prices impact manufacturing and sales. Improved technology can reduce battery costs, increase efficiency and improve driving range, making EVs more accessible and attractive to potential customers. Infrastructure: Easy and affordable access to charging infrastructure—both standard AC charging as well as rapid DC charging—is a key to meeting customer needs. Customer Demand: The demand of the customers is surely challenge for digital economy on mode of transportation in the world and India.

2. Review of Literature

The literature search was mainly focused on topics related to Electric and Hybrid cars. The review of publications and research work revealed the basic guidelines and area of work need to be conducted exhaustively on a particular model of car, where positive result is expected, in favor of society and future demand for saving of fossil fuel and environment pollution point of view. The literature search was mainly focused on topics related to Electric and Hybrid cars. The review of publications and research work revealed the basic guidelines and area of work need to be conducted exhaustively on a particular model of car, where positive result is expected, in favor of society and future demand for saving of fossil fuel and environment pollution point of view.

This chapter of literature review is divided into:

1. Electric vehicles (EV)
2. Batteries for EV

The research papers available for viewing and reference on internet search engines and through related websites for the knowledge and information sharing on public domain is cited below. The literature search was mainly focused on topics related to Electric Vehicles (EV). The publications related to simulation, critical analysis and empirical study using available software were reviewed in detail. Also, study of vehicular propulsion systems based on alternate sources of energy was attempted to a certain extent; however it was restricted more importantly to the literature related to fuel saving objectives, rather than research work carried out for reduction in constituents of harmful pollutant exhaust gas emission perspective and saving of environment against global warming. Since, the objective of the proposed work is to save fuel consumption on existing cars, which will automatically have crucial impact on the automotive emission; the main attention was paid to review of literature on the work carried out in the past by learned researchers in the field of fuel saving.

Electric vehicles (EV): Morkel, (2010) in this paper the requirement for infrastructure development, challenges and opportunities for design and deployment of emerging infrastructure, related to Plug in Electric Vehicle (PEV) and the potential benefits are summarized in detail. The author had addressed the crucial points to maximize the benefits from the opportunity for reducing

fuel consumption, from battery manufacturing to communication and control between the vehicle and the electric power grid to provide for clean electricity with safety. **Holms et al**, (2010) explained in their report the working of electric vehicle and compared it with the conventional internal combustion engine and hybrid electric vehicle. The report provided the details of advantages and disadvantages of Electric Vehicles along with the future views of technology. **Eberhard et al**, (2006) in their paper on "The 21st Century Electric Car", had experimented Tesla Roadster EV with lithium ion batteries, for well – to – wheel energy efficiency and well – to – wheel level of emission. When compared with Natural gas engine, hydrogen fuel cell, diesel engine, gasoline engine and hybrid gas/electric car, well – to – wheel energy efficiency found to be high and well – to – wheel emission found very low for Tesla Roadster EV.**Santos et al**, (2006) studied the power converter and its control for an electric traction vehicle and solutions encountered during development were discussed in this paper. The focus was directed towards strategies and construction problems for the power converter (controllers), the protection and control of the power train. The vehicle considered for the study used 11 KW – 48 V DC motors. The safety concerns were important to be considered for the proposed architecture, because this motors needed a high current value of 200 A (approximately). A DC-DC power converter was discussed in detail to achieve energy conservation and low power dissipation depending upon the motor operation demands, in forward and reverse direction movement of the vehicle. The paper stated the reasons for need / importance for control of variable output current of the converter rather than voltage control under intuitive correlation between throttle control and torque developed w.r.t. ICE as well as for the protection and safety of Motor, controller and several electrical & mechanical components. The methods of current control, in-particular sliding mode control were discussed. **Chetan Kumaar Maini**, (2005) in his paper indicated potential requirement of the design and development of globally competitive small electric concept vehicle for India and concluded that EVs are the best solution to reduce pollution in cities, and important societal and economic benefits would result by implementation of EVs and HEVs. The paper also outlined the role played by the Government and communities worldwide to promote and accelerate EV program.

Batteries for EV:Yang et al, (2002) considered the challenge for enhancement of limitation of travel range of electric Vehicles. The authors had attempted and compared the Al/air EVs life-cycle analysis with Lead Acid Battery operated EV as well Nickel Metal Hydride (NiMH) battery operated EVs. The author's analysis claimed that (due to high energy density) only Al/air EVs are most capable, with respect to ICE and EVs, in terms of travel range, price and life-cycle cost. **Rebecca et al**, (1999) introduced rechargeable batteries characteristics and use, a module focusing on nickel – cadmium batteries, since batteries represent a large volume of toxic and hazardous material and these materials must be managed to avoid or minimize dissipation in to the environment. To determine total environmental impact of a battery system, all stages of battery life

were consider in this module for life cycle emissions and energy use estimated for NiCd batteries. Current battery collection and recycling practices were briefly explained and an expression for estimating NiCd recycling rate was given. The results stated were included for implementation programs by battery organizations, to improve NiCd battery collection and increased consumer education. **Johnson et al**, (1998) described the physical design, rate, cycle – lifetime, and self-discharge performance of battery cells from various battery manufacturers, in this paper. The specifications and performance as well as design differences are discussed. The results showed that larger capacity gains are possible by using high capacity carbon electrodes. Different cells had shown different strengths and rapid discharge, cycle-life characteristics, depending upon use of hard carbons.

3 Research Methods

Primary data are collected from four wheeler owners at Bangalore city .The sample size is 100.We did random sampling of cars coming to malls and university to study the scenario .

4 Results and Discussion based on objectives

The major findings and suggestions of the study are

Majority of the people have non electric cars and hence only just 10% of people have of them use electric car. This could be that there isn't much interest taken by the people to use electric car. Prize factor is the most considered factor taken up by the people. As they feel that prize of the car is the main than compared to anything else and performance is the least factor considered by them. Majority feels that there is no good return on investment. As they think that electric aren't as good as non-electric cars and others feel that it is a good return on investment and few of them aren't sure of it. Majority of the customers prefer to buy new non electric cars of lower range of Rs 2-4 lakhs. As they don't want to spend much and least customer prefer to buy a new non electric car than Rs 6-8 lakhs and Rs 8-10 lakhs. Many would buy similar model but electric car of Rs 2-4 lakhs and less would buy similar model car of Rs 8-10 lakhs. As they feel that they don't want to spend. Majority are constantly conscious as they feel they are against pollution. So hence they feel they love to save the environment. Least people preferred occasionally as they are concern only for certain occasions.

Majority feel that the benefit of electric is to produce less carbon emission. As they feel that the electric emit less or no carbon emission which lead to healthy environment. Minority feel that it performs well. As they feel the performance of electric car isn't up to the mark. Majority of the people feel that electric cars take tong time to recharge and have low number of charging station available. As the customers felt that it is a time consuming process for recharging the battery and also have experienced that there aren't enough charging station and minority feel that recharging is inconvenient and initial cost to purchase the car. Majority of the customers would or wouldn't buy electric car in the future. As some of them

feels that they like to buy or don't like to buy 0and least feels that they aren't sure regarding to buy the electric car or not.

Majority of the customers aren't sure when to buy the electric in the future and minority of them feel that they would buy from the next 0-6 months an electric car.

Majority of them would prefer sport bike as model if made available. This could be because they would like to drive fast and would like to be racer and minority of them feels that they would choose city car. Majority would buy hybrid car. As they feel that having both combustion and non-combustion engine in the car is good and minority feels that not buying a hybrid car is good. This could be because that the people don't like to prefer both the engines in the same car.

The major suggestions of the study are:

Encourage people to buy non electric cars for making environment eco-friendly and reducing pollution. Encourage people to buy electric cars and avoid too much spending on non-electric cars as both are meant for travelling beside luxurious benefits of having a car. Encourage investments on electric car. Creating awareness about the electric cars and its useful benefits in getting customers favorableness towards the electric cars and encourage in building more recharge stations for promoting and extending the battery life of electric cars.

5 Conclusion

The progress that the electric vehicle industry has seen in recent years is not only extremely welcomed, But highly necessary in light of the increasing global greenhouse gas levels. As demonstrated within the economic, social and environmental analysis of this section, the benefits of electric vehicles far surpass the costs. The biggest obstacle to the wide spread adoption of electric powered transportation is cost related, as gasoline and the vehicles that run it are readily available, convenient and less costly.

We hope that over the cause of the next decade technological advancements and policy changes will help to ease the transition from traditional fuel power vehicles. Additionally, the realization and success of this industry relies heavily on the global population and it is our hope that through mass marketing and environmental education programs people will feel incentivized and empowered to drive an electric powered vehicle. Each person can make a difference, so go electric and help make a difference.

INDIAN RADIO TAXICAB MARKET FUELLED BY PREDATORY PRICING: OLA v. UBER v. EVERYONE

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In India the rising demand for radio taxi services can be credited to changing lifestyles of travellers and increasing disposable income with the people of the country. Moreover, radio taxis offer hassle free travel experience along with custom option to choose suitable vehicle to customers. Additionally, the growing inclination of customers towards radio taxis can be attributed to various tangible and intangible offerings or options such as booking convenience through mobile applications, air conditioning, educated and skilled drivers and operators, multiple payment options, 24×7 customer support, electronic fare meters, GPS enabled vehicles, offers and incentives etc. provided by the radio-taxi service providers. Increasing investments by venture capitalists and rising radio taxi usage by individuals, corporates and tourists are boosting the demand for radio taxi services. As a result, the radio taxi companies have expanded their fleet size and this has driven dramatic growth in radio taxi service market of the country.[1]

According to the TechSci Research report, "India Radio Taxi Services Market Forecast & Opportunities, 2021", which shows the trends of radio taxi service market in India since its initiation of functions in the country, the radio taxi services market in the country is forecast to grow at a compound annual growth rate (CAGR) of over 17% during 2016-2021, on account of rising promotional activities by radio taxi operators, and need for enhanced safety and security features.[2] The expansion or growth of radio taxi services market is also being supported by leading OEMs such as Hyundai, Tata, Maruti Suzuki, etc. who offer car models specifically for the radio taxis.

There are various models under which a radio taxi service can be operated by radio taxi service provider. In the asset-owned model, the radio taxis are owned by radio taxi service provider. In aggregator model, the operator does not own a cab but only acts as an aggregator (platform) that connects the drivers with the prospective consumers through various means, like Ola and Uber. The last is the hybrid model, in this, the radio taxi cab operator operates as a mix of both of the abovementioned models, like Meru Cabs.

In early 2005 and till 2010, organised radio taxi services were introduced in India and almost all radio taxi service providers in India operated through the owned assets model initially. Only after 2011, a change was seen, radio taxi service companies commenced operations through the aggregator business model, consequent to which, the country's radio taxi services market witnessed robust growth in the sector. Radio taxi services in India exhibited a CAGR of around 60% in value terms, during 2011-2015.

The fleet size of the radio cabs, mainly concentrated in Indian Metropolitan cities. With demand far outstripping supply, the total number of radio cabs was expected to increase at a compound annual growth rate (CAGR) of 25 percent. Along with that there was decline in the growth rate of non-radio taxis due to ageing cabs, the significant growth in India's urban population, increase in the disposable incomes, high traffic on other forms of the public transport, greater perceived comfort compared to driving one's own vehicle official reimbursement of taxi fares, influx of tourists and increased airport trips, were some of the factors that led to the increase in the demand for radio cab services. However, there are many other constraints which hindered growth on the supply side like, shortage of suitable and educated drivers, high cabs maintenance cost and varying governmental regulations in every state. Many drivers who already owned their own cabs or worked for other non-radio cab operators baulked at paying the high daily rental fee to the radio cab company. Even though radio cab drivers typically earned 70 per cent more than their non-radio taxi counterparts, many drivers preferred not to join radio cab companies. Taking the facts that it was compulsory for the drivers to pay daily rentals even if they were not driving the cab meant that they had to work every day of the week, which was one of the issues which reduced the availability of the drivers. Adding on to that, the radio cab industry was highly regulated and government regulations were state specific. The problem of Red Tapism, the ceiling on the number of permits that could be held by a radio cab operator, stringent criteria for qualifying to become a radio cab driver, restrictions on size of the radio cab and government regulations regarding fares, were some of the drawbacks of the regulatory environment in which the radio cab industry was operational. These factors contributed to the sub-optimal supply of radio cabs, resulting in high rates of denial of service.

Securing the supply side, i.e. cabs and drivers have become slugfest among India's top three on-demand taxi companies- Ola, Uber and Meru. Ola and Uber are backed by the global venture capitalists and are threatening to make every other taxi company irrelevant in India and many have even vanished. Home-bred Ola is competing head to head with the world's strongest start-up in terms of financial resources. While all other taxi services are struggling at least maintain not increase their market share in this competitive environment.

Uber is the world's largest startup company boasting a valuation of $69 Billion. Uber has shifted his focus to India ever since Uber gave up on the Chinese market in 2016 following intense competition from the local player Didi Chuxing. Uber is diverting a big portion of $10 Billion it raised from Didi into the Indian market for creating a market. India's market is poised to grow at $10 Billion, Uber has been making a strong pitch to enter other transport areas besides the traditional cab services via its mobile app.[3] It has already launched it Uber pool and uber moto services and now plans to introduce buses and mini-vans for people through its ride-hailing app. Uber also looks to increase

employee base at its Bengaluru engineering centre and also plans to recruit a million drivers over the next coming years. Uber is also betting big on its enterprise offering – Uber for Business (U4B) - to drive its growth and expand functions in the country.

Uber is pure play app-based service and had a westernised template. One can book cab only through the app. There are no cash payments accepted globally but the company just made the exception in India by allowing cash payments. Almost all countries have the uberX service but only India has a cheaper version in uberGO and there is a subtle difference in the operational model between India and the US. While it is in India only a driver with a commercial driver's licence and commercial insurance can enlist, in the US, anybody with a personal vehicle can become an Uber driver provided he has a driver's licence and insurance.

Ola entered the market in early 2011 and had a market share of only 5-6% in the year 2012-2013 which increased to 61-62% in the year 2015-2016. It not only provides cab services in their market but also launched autos for transportation services in 2014. It also launched food service delivery system called Ola Cafe. It operates in more than 100 cities and has the huge fleet size of the drivers. In 2017 it was able to raise the fund worth $2 Billion in the fundraising and has a valuation of $7 Billion. Till the arrival of Uber, it had a significant market share in the relevant geographic market.

The Initial Phase

The initial explosion in monetary incentives and offers given to Uber and Ola drivers by these online taxi aggregators not only attracted existing drivers (drivers who earlier worked for Meru and other cab operators) but also new entrants from the other fields of occupation who entered this sphere. The average earning capacity of the cab driver in India shot up to three to four times of the previous earnings. In few scenario, the owners of local cab-hiring agencies themselves started driving for these companies. Many started working overnights and others took up the night shifts. Many young professionals quit lower paying call centre jobs to take up the Uber and Ola cause. It became a revolution that generated thousands of jobs, raised the standard of living for drivers and revamped the commuter experience through convenience, safety and price. Their advantages coupled with the lowered prices resulted in the creation of high demand. Though there were initial entry barriers from the supply side (drivers) but it got somewhat streamlined and this high demand led inevitably to an oversupply of cabs and drivers. Due to lucrative pictures were shown by the companies and constant consumer flow- drivers took loans to buy cars and other vehicles – and got into debt without thinking twice.

Competition Phase

The only question was how could these companies continue to ensure high earnings for their driver while charging low prices? With fuel costs, devices, car maintenance and so on, how much money could Ola and Uber continue to pump in the radio taxi cab market? The picture eventually got cleared towards the end of 2016 that the model perhaps is not sustainable. Within the span

of few months, Ola and Uber went from being one of the most desired companies to work for to become the nightmare for drivers who finally woke up to the fact that the online taxi aggregators would not provide security, protection or compensation in cases of accidents or unintentional damage. Incentives were also cut and commission rates were also increased. The strikes by Ola and Uber drivers in the beginning of 2017 proves the fact that there is a lot of distress among the working class who have nothing but their labour to sell.

Both Uber and Ola do not treat their drivers as employees. It has been implanted in the minds of the drivers that they are employed for perpetuity and worse they believe that their earning will continue. Uber and Ola used to almost double the bill payment to drivers based on the latter meeting their targeted hours and value on daily bases and was given with the name of an incentive for billing and meeting a target. This practice was realised to be not sustainable as this payment is being subsidised by these companies from equity capital. Many drivers who did not know this believed that their earnings are based on their efforts in meeting the targets, they had no idea about their short existence and can see the changes happening now as incentives are vanishing.

Predatory Pricing

The predatory pricing model that these companies have adopted is destroying the single cab owner entrepreneur business model. This is something that our government and policy-maker did not even dream of. Also, these companies are basically destroying the public transportation ecosystem.

India has its competition regulator, Competition Commission of India (CCI), and it has already decided and is investigated several issues of predatory pricing against the taxi and e-commerce companies. If someone looks closely at the judgements of the CCI, one can see that India's competition law (Competition Act, 2002), which governs CCI decisions, is itself deeply flawed and lenient. It contains many loopholes because of which these companies have been acquitted on technical grounds. In a glaring omission, there is clause against the practice of predatory pricing titled 'Abuse of dominant position' in section 4 of the Act. It says that anyone who is indulging in predatory pricing can only be found guilty when the player is already dominant in the relevant market. In one of the CCI's decision it was held that- "since OP group (Uber) does not seem to be dominant, there is no need to go into the examination of OP group's conduct in such relevant market." From the judgements, it can be seen that the regulator is content to wait till these companies occupy a dominant position or market share through cheating, after which it might be too late.

Relevant Product Market

For the purpose of determining whether these cab companies are abusing their position or doing any discriminatory practice, it is important to determine its relevant product market as provided in Competition Act, 2002. According to the Competition Act of 2002, "relevant product market" means a market comprising all

those products or services which are regarded as interchangeable or substitutable by the consumer, by reason of characteristics of the products or services, their prices and intended use.[4] CCI has from time to time referred to foreign judgments and has used their principles to take decisions at hand. The European Court of Justice has held[5] that when identifying a dominant position the delimitation of the relevant product market was of crucial importance. Further, it is essential, that two or more products share characteristics and have functional interchangeability for them be to be considered part of the same market.[6]

Here in the Indian markets, there are other means of transport like buses, auto-rickshaws, yellow taxi, radio cabs etc. But CCI has held that app-based taxi and auto-rickshaws are different markets, which mean that the latter have no protection against the discriminatory practice of predatory pricing as they latter fall in the different market. This omission can't even be blamed on the law, which duly states that products/services that are "perceived to be substitutable by the consumer by reason of their basic characteristics, intended end-use, price etc." form part of the same market.[7] The factor which differentiates auto-rickshaws from taxis is their cheap cost, although not when those are run by Ola and Uber. A consumer will obviously prefer an air-conditioned cab over an auto when cabs price rate are cheaper.

The other reasons were also relied and merited on to further demarcate the market and differentiate radio taxis from other modes of transport in *Fastrack* v. *ANI*.[8] It was observed that the key features of radio taxi, viz. point to point pick and drop facility, ease of booking, pre-booking facility, round the clock availability even at obscure places, predictability in terms of expected waiting and journey time, reliability in terms of GPS/GPRS tracking, ease of payment, quality vehicles, professional and well trained drivers, feedback facility etc. make radio taxi services different other modes of transport.[9]

Competition regulatory body employs various econometric tools to arrive at relevant product market. One such test is Hypothetical Monopolist Test or the SSNIP Test. According to this test; suppose that a producer of a product is to introduce a small but significant non-transitory increase in price, would it be enough for the customers to switch their purchases to other products? Only if the answer is yes could it be inferred that the market is wide enough to include such other products as well.

Understanding this concept with relevant example- the Commission in one case[10] opined that the cable TV service was a distinct product and was not a perfect substitute of other platforms of TV channel transmission such as DTH, IPTV etc. since the product characteristics of cable TV are entirely different from other platforms and hence the need of carrying out an SSNIP test would not materially affect the determination of relevant market. The change in the price of cable would not affect its market in comparison to DTH since the characteristics of the two platforms are entirely different. On similar lines, in our condition, there is a perceivable difference between various key features provided by radio taxis in particular

and other modes of transport which either differ or lack in the aforementioned features.[11] Hence there would be no interchangeability between radio taxi operators and other modes of transport on the grounds of their characteristics being fundamentally different.

But on the other side, arguments have been discussed against this division of transportation service market by the Regulatory authority. Opponents of above practice and the decision by CCI wants all commercial transport service market to be considered as one market i.e. radio service cabs, autos, yellow taxis etc all in one category. In this context, it is to be noted that certain caveats should be observed while measuring interchangeability. One such caveat is being that physically very different products may be close substitutes if customers use them for similar purposes.[12] For example, in its report on Matches and Disposable Lighters[13], the then Monopolies and Mergers Commission included matches and disposable lighters in the same market because customers view them as close substitutes. Similarly, the products' prices do not have to be identical. For instance, if two products perform the same purpose, but one is of a higher price and quality, they might be included in the same market. The question is whether the price of one sufficiently constrains the price of the other. Although one is of a lower quality, customers might still switch to this product if the price of the more expensive product rose such that they no longer felt that the higher quality justified the price differential."[14]

The opponents argue on the wrong application to SSNIP test by regulatory authority through the argument that on application of the SSNIP test if Hola was to increase its prices in future, the same customers who had in the first place opted for Hola by virtue of it being more affordable than other premium cabs would now have the option of reverting to other modes of transport inclusive of private taxis, auto-rickshaws and radio auto rickshaws as well. This essentially means that the relevant product market should be expanded to include the aforementioned modes of transport as well. It is to be borne in mind that the process of defining the relevant market for checking predatory pricing starts by looking into a relatively narrow potential product market definition. The potential product market is then expanded to include those substituted products to which buyers would turn in the face of a price increase above the competitive price. The reason to that relevant product market should be expanded to include other transport is that, active presence of yellow taxis and continuous reliance of commuters on such taxis indicates that yellow taxis provide a viable alternative, in effect posing a significant competitive constraint on radio taxi operators. In such a scenario, it might be appropriate to incorporate yellow/private taxis owned by sole proprietors within the relevant product market.[15] The other reason being that auto rickshaws in most of the metros ply on a hire basis and charge according to the fare meter. In spite of certain perceivable differences prevalent between the characteristics of radio cabs and auto rickshaws, both are used for the same purpose i.e. providing ferrying and transit services to the people. Likewise, the caveat

that physically different products which are priced dissimilarly can be considered as close substitutes of each other if they serve the same end purpose can be applied in this context.[16]

Unfair pricing

Predatory pricing means the sale of goods or provision of services, at a price which is below the cost, as may be determined by regulations, of production of the goods or provisions of services, with a view to reduce competition or eliminate the competitors.[17] It is a cost-based approach combined with the intention on behalf of the dominant undertaking to reduce competition or elimination of competitors.

To check the lawfulness of the predatory pricing, the 'sacrifice test'[18] can be used. This test asks whether the dominant firm conduct in question would be profitable, or make business sense, but for its tendency to eliminate or lesson competition. A dominant firm engages in predatory conduct when it deliberately incurs losses or forgoes profits in the short term and causes anti-competitive foreclosure.[19] Predatory pricing fails the sacrifice test since it entails short-run losses and is profitable only because of its tendency to eliminate or deter rivals.

In the case of *AKZO Chemie BV* v. *Commission,*[20] it was held that any price below the average variable cost by means of which a dominant enterprise seeks to eliminate a competitor must be regarded as an abusive practice since there is no conceivable economic purpose for charging a price below average variable cost by an enterprise other than elimination of a competitor.

Ola and Uber have kept their prices low to such a level that they have been incurring losses with the aim to create a market base of their cabs. India's largest Cab-hailing application 'Ola' racked up a consolidated loss before tax of Rs. 2,313.66 crore in FY16 compared with the last year's loss of Rs. 796 crore as it spent heavily on defending its market leadership against Uber.[21]

The below-cost pricing strategy followed is good for the consumers but might be harmful later. The European Court of Justice has held that any price below the average variable cost by means of which a dominant enterprise seeks to eliminate a competitor must be regarded as an abusive practice since there is no conceivable economic purpose for charging a price below average variable cost by an enterprise other than the elimination of a competitor.[22]

Entry Barriers

There are high entry barriers in the relevant market. Radio taxi service market is characterized by network effect which can act as an entry barrier. Network effects, which are also called demand-side economies of scale, result when a product or service becomes more valuable as a function of the more people use it. Since it would take considerable time for the new players to capture a good position and compete against an established player, the network effect results in high entry barriers for potential entrants. There are International case laws where network effects were shown to be posing a significant barrier to entry viz., European Commission decision in *Microsoft*

case[23] and District Court of New York's decision in *MasterCard/Visa case*[24]. It is claimed that Hola was the first player to build a strong network with the help of its predatory model by virtue of which, it tipped the market in its favour, which has given it a strong edge in the market over its competitors.

These companies basically have a long term plan of forsaking profits in the short term, for which they get capital from their parent company or the investors. These companies deliberately follow the practice of predatory pricing through huge capital funding which acts as an entry barrier for small and medium enterprises that cannot enter the market because of inadequate funds. Even if they do manage to collect external finance, multiple rounds of capital raisings and substantial price decreases by these companies aggressively could adversely affect the other competitor's performance so that its access to further financing may be seriously undermined.

Network effects may act as a barrier to expansion or entry.[25] Network effects, just like economies of scale, may make new entry harder where the minimum viable scale (e.g. in terms of users of the network) is large in relation to the size of the market.[26]

In two-sided markets, network effects may enable a large platform/network to become dominant and insulate itself from potential competition as entrants may find it difficult to challenge the large incumbent. However, the strength of network effects will vary depending upon the nature of platform market under consideration. Large networks offer more value to users than small networks. A successful network/platform requires that at both sides the platform's network is wide and dense, *i.e.* larger the number of participants to both sides of the network/ platform, greater the possibility of each participant having a substantial number of potential matches on the other side of the market.[27]

Position of Strength

The Position of strength enables an enterprise to operate independently of competitive forces and market constraints.[28] "'Position of strength' is not some objective attribute that can be measured along a prescribed mathematical index. Rather, what has to be seen is whether a particular player in a relevant market has clear comparative advantages in terms of financial resources, technical capabilities, brand value *etc.* to be able to do things which would affect its competitors who, in turn, would be unable to or would find it extremely difficult to do so, on a sustained basis."[29]

It is the overall size and resources of an enterprise or the overall importance of a competitor that has to be considered to see the comparative position of strength and not the limited manifestation of that strength in a particular product or geographic market.[30] A firm's access to the international capital market is a significant factor in determining whether it enjoys the position of strength.[31] Both Ola and Uber has been able to raise a huge amount of money through regular capital raisings. Ola which is valued at $7 Billion[32], recently raised $2 Billion from the investors[33], whereas Uber which is the largest start-up is valued at $68 billion pledged $1 Billion for the Indian markets in the year 2015. Both of these companies are

aggressively competing in the Indian market through below-cost pricing strategy backed by strong funding has led to the decline in the market share of other cabs services, like Meru cabs, megacabs, carzonrent, easy cabs etc. Ola and Uber also enjoy economies of scale. **"**Economies of scale refer to the reduction in long-run average costs that come from operation at a larger scale, i.e., at a greater level of output. Economies of scale are sometimes viewed as a barrier to entry because they make operation at small market share unattractive. In such circumstances, entry would have to be at a large scale, putting a large investment at risk and making success dependent on the ability to attract a substantial fraction of incumbents' customers, which in turn is likely to require pricing well below pre-entry levels."[34]

CCI in its earlier judgments has acquitted Ola from the charges of predatory pricing and unfair competition filed by other taxi cab services. The acquittal was done on the reason that since there is Uber in the market which is growing at a good rate in Indian radio cab market, Ola cannot be in a dominant position as there is another player in the market who has acquired a market share and Indian law permits only one dominant player for predatory pricing. This clause in the law has become an escape clause for companies with big pockets and indulging in unfair competition. But there is scope of collective dominance in India which has not been recognized by the Indian law. Many foreign laws on which India's competition law is based upon has collective dominance as part of anti-trust laws or competition law. It can be said that two or more enterprises can be collectively dominant at the same time.[35] Legally independent economic entities may be collectively dominant where 'they present themselves or act on the particular market as the collective entity'.[36] In order to establish the existence of a collective entity, it is necessary to examine the economic links or factors which give rise to a connection between the undertakings concerned.[37] But the existence of an agreement or of other links in law is not indispensable to a finding of a collective dominant position; such a finding may be based on other connecting factors and would depend on an economic assessment and, and in particular, on an assessment of the structure of the market in question.[38] The essence of collective dominance is parallel behaviour within an oligopoly i.e. to say tacit collusion or tacit coordination.[39]

Recoupment

The only thing which is working in defence of the all the unfair competition by these big cab aggregator companies is the recoupment. To charge any company of predatory pricing, the recoupment of losses by the company is an essential component. Recoupment means to sell a product at a price sufficient to recover the original outlay or to offset a previous loss which a company has incurred initially to create its market base. The law in the US requires that an element of the offence of predatory price cutting is that the predator has the ability to recoup any losses incurred.[40] Privy Council has also stated that 'It is the ability to recoup losses because its price-cutting has removed competition and allows it to charge supra-competitive prices that harm competitors'.[41]

Recoupment test assumes the occurrence of such pricing and test whether it is likely to succeed. Such a test aims to determine whether a company's predatory price action is likely to result in the elimination or deterrence of competition. If the recoupment test indicates that there is little or no likelihood of recoupment, then predatory pricing would be irrational and therefore it is assumed that it has not been undertaken. As per the recoupment test, even if a company is charging below cost and recoupment is not possible to achieve, then this test enables court or the competition authorities to dismiss the allegations of predatory pricing without having to go further and to conduct price-cost tests. Many competitive agencies have undertaken and considered recoupment tests in case of predatory pricing allegations.[42]

In India, there is no direct evidence of recoupment by these companies. There is only one evidence to state a possible recoupment and that is when these companies indulge in surge pricing. But the number of incentives and money which these companies have shelled in the Indian market cannot be recouped by the surge pricing as it is for a very small duration over a small area of the geographic market. For a successful recoupment, they require a significant increase in the fares for a long time as they have been providing the incentives and schemes for more than five years. There have no direct evidence of recoupment by these companies till now and assuming if in future these companies indulge in recoupment by increasing the prices, the consumers would then shift to other means of transport like buses and autos. Thus making recoupment a failed strategy, which means that the possibility of recoupment is also very low in the relevant market?

Conclusion

Indian Market has seen an influx of radio service cab providers based on aggregator's model. Few of them were backed by deep-pocketed investors and were quickly able to create a market for themselves on the cost of others cab services by indulging in the predatory pricing. Few of them even approached the Competition Commission of India but due to technical and legal loopholes, these companies were not held liable. Though the presence of all these companies on the Indian roads have created a lot of option for the consumers and has proven the saying right that 'Consumer is King', but at the same time has thrown the drivers off track. The author has tried to include all the arguments that have been used by the proponents and opponents of the legal tussle going between various cab aggregator companies. There are many obstacles on the road to clear a way for fair competition.

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CUSTOMER PERCEPTION TOWARDS DIGITALIZATION IN SMALL SCALE INDUSTRY

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Abstract

Digital economy is a type of economy where all transaction such as buying and selling goods and services and payment take place through online. The paper aims to present the findings of an empirical study carried out based on the awareness of digital Economy in small scale business. The purpose of the study is to spread awareness among customers about digital Economy in small scale Business. The purpose of the study is to characterize the factors, the skills needed in the sector for the purpose of powering the emerging Digital Economy. Moreover, the study through review of literature extends to cover the awareness of small Scale business in case of Digital Economy.

Keyword

Digitalization, Internet, small scale industry, customer perception.

1. Introduction

All human beings , where ever they are, do different type of activities on a daily basis. All activities done by human beings are known as Human Activities. These Activities can be broadly classified in to 2.They are Economic Activities and Non Economic Activities. Economic Activity means all activity which are undertaken to earn money and there by satisfying human wants. The main aim of Economic activity is to earn income and create wealth.

Economic Activity concerned with production of goods in a factory, a worker working in a factory, a shopkeeper selling goods, a manager working in office, a doctor operating in his clinic, a teacher teaching in school etc.(system Approach of Business Studies, Dr. K.G. Chandra shekharan Nair)

According to Brown and Petrello "Business is an institution which produces goods and services demanded by people." It means Business is an institution that produces goods and services needed by society. If the demand is increased, the producer also will increase production. Business is one of the most important economic activities. Business deals with both goods and services. The main aim of every business is profit maximization. Risk is an important element in every business.

Finance is the fund required to do any economic activity. There are two type of finance. Owners fund and Borrowers fund. Finance is the life blood of every business organization. Every business need finance to meet its day to day obligations and long term obligations. Without finance no business can

exist in the economy irrespective of its nature and type.

Digitalization is an innovative idea put forward by Indian Government to improve online infrastructure, by using internet facilities and thereby making India a digitally empowered county in the field of technology. The main aim of Digitalization is to increase the use of digital work by reducing paper works. The project has been aimed to be completed by 2019. It is the project in which will benefits both, service providers and consumers. There is an arrangement of digital India advisory group (Chaired by Ministry of Communications and IT)In order to monitor and control this program.

1.1 Customer Perception

Customer is a person who buys goods or services for satisfying his needs and wants. Customers can be otherwise called as consumers. A marketing concept that encompasses a customer's impression, awareness and or consciousness about a company or its offerings. Customer perception is typically affected by advertising, reviews, public relations, social media, personal experiences and other channels.(Business Dictionary)Customer Perception or customer awareness is a part of companies management .It can be otherwise said as the process done by an Entrepreneur to create awareness or make the customer educate about his goods or services. The main problem faced by the business world is that to creating awareness to its customer who are different from one another.

1.2 Customer Perception Towards Digitalization

Internet has an inevitable role in the fast moving scenario. Marketers and sellers has got a positive Impact on Digitalization because, they acquire wide range of customers all over the world (Anand Thakur, Shabnam, Rupinderdeep kaur, 2016)

Internet is a place where buyers and sellers can interact freely without any cultural barriers. The use of internet is widespread all over the world due to its high speed and level of comfort(Joshi and Achuthan,2016)

1.2.1 Online Shopping

Shopping is the process of purchasing goods and services needed by a customer to satisfy his wants and needs. Online shopping is an innovative idea in the field of business where this transaction can take place through online or using with the help of internet. This is very effective way because anybody can purchase anything at anytime from anywhere. Shopping can be done easy without visiting the shop and standing in a longue queue.

Online shopping is beneficial for both parties that is purchaser and sellers. Price comparison is available in online shopping. (Gurleen, 2012) Fraud, Lack of trustiness and chances of malpractice, due to all these customers fails to use online shopping (Chen, Gilienson and Sherrell, 2002)

1.2.2 Online Payment

Online payment method is an innovative payment system in the modern era. It is the way of paying cash with internet facility.

Majority of the customers are using online payment for their transactions. Online line payment is widely accepted by its users because of its easy accessibility and convenience.

In case of online shopping, online payment is a critical gateway. So, the customers who doing the Online payment should feel safe and secure in all aspects. (Shilpa, Praveen Shara, 2013)In case of online payment transactions are secured with the use of SSL/TLS protocol in order to protect the relation between customer and server (Holly Lynne Mc Kenly)

Online payment can be said as a Digital Technology. "Digital technology provides a low cost way for people in developing countries to sent money to each other, buy and sell goods, borrow and save as long as the financial regulation environment is supportive"

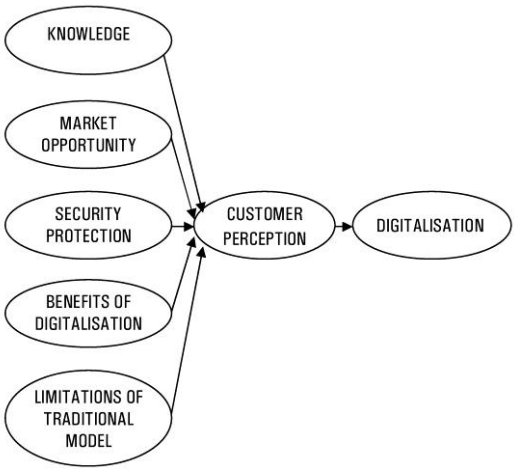
1.3 Digitalization in Small Scale Industry

Industry or business is one of the forms of economic activity. Economic activity can be broadly classified into two according to its size. They are Small scale industry (SSI) and Large scale industry (LSI). Small scale industries are those who operate in small scale. That means buying and selling of goods and services in short range.

Coaching classes, Food supply, Marriage bureau, Hobby centre, Real estate agencies, Beauty parlour, Photography these are the examples of small scale industry. All these Small Scale Business idea with Investment up to rupees 50000.

Digitalization in small scale industry brought a remarkable change. Every small scale business man has got an opportunity to get a wider market for their products. Increase the number of competitors. When everything is Digitalized and tracked, business can work directly with suppliers and suppliers while gaining more control over their business

2. Research Model and Hypothesis



Knowledge

Knowledge is a familiarity, awareness or understanding of someone or something such as facts, information, skills which is acquired through experience and learning. Customer knowledge refers to understanding your customers, their needs, wants and aims. it is essential if a business is to align its processes ,products and services to build real customer relationships.

Knowledge is defined as consumers degree of acquaintance with a selling entity, which includes knowledge of the vendor and understanding its relevant procedures such as searching for products, information and ordering through websites. (Kim, Ferrin and Rau, 2008)

Market Opportunity

Market is a place where buyers and sellers meet for satisfying their wants by buying and selling goods or services. A situation in which a product, service etc that is potentially wanted or needed by consumers is identified by a business or not been supplied by a rival company.

The digitalization of enterprise is also opening up new market and creating eco system that often extent across multiple sector. (Paul sallomi)

Security Protection

The main problem faced by people while doing online transaction is lack of security. Every customer expects safety and security in their transactions .The procedures can ensure the safety of customers, about their crucial or important details, such as debit card number, password etc (Lee and Turban,2001).Producer take continuous efforts in improving the measures taken for the safety and security of customers. The customer use or promote digitalization only if he feel security in his transactions.

3 Benefits of Digitalisation

1. Increased productivity

By the arrival of digitalization more customers started to buy more goods and services through online due to its easy accessibility. so it will leads to increase in productivity.

2. Cost efficiency

The main cost incurred in the traditional model is cost for transportation and payment made to middleman. these cost can be minimized by the arrival of digitalization .so it ensures cost efficiency.

3. Easy to access and always accessible

Any product or service from any part of the world can be access in our single touch. These products and services can be easily accessible at any time at anywhere.

4. Enhance security

Security is the main factor which influences digitalization. Transaction done on online is more secured than traditional method .There are various measures taken by the producer to ensure the safety of his customers.

5. Save time

By the arrival of digitalization the customers can save their valuable time. The time spent for travelling, standing in long queues for paying the bill can be avoided.

4. Limitations of Traditional Model

1. Expensive

The main cost incurred in the traditional model is cost for transportation and payment made to middleman. It increase the financial burden of the customers.

2. More time consuming

In traditional method the customer need to visit the shop for satisfying his needs .it will take more time to satisfy his needs.

3. Cultural barriers

The customers are force to purchase the goods which are available for him under his geographic area. So he will not be able to get right goods to satisfy his needs.

4. Not Convenient

Traditional method is not that much convenient because customers will not get products when they needed due to closing of shops, strikes etc.

5. Conclusion

The review of literature made for this study on "customer perception towards digitalization in small scale industry" To justify the need of present study we created literature review for supporting our work .From our study we can conclude that customers are more thinking about digitalization in a positive way, and they are ready to understand the great opportunity put forward by digitalization. Digitalization helps small scale customers in various ways they are opened a wide range or big market in front of their customers for buying and selling of products without any cultural or geographic restrictions at any time without undertaking any further effort..so, we can conclude that customers are highly aware about digitalization.

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DIGITAL RIGHTS MANAGEMENT UNDER INDIAN COPYRIGHT ACT

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Introduction

Copyright is a set of exclusive rights granted to an author of a work based on a statutory law. This grant is for a limited period of time. The objective of Copyright law is to foster creativity by offering a limited monopoly as an incentive for their creative efforts. Law strives to maintain these two seemingly opposite objectives in varied ways. It delineates what can be protected and what cannot, the uses which are permitted without an authorization from the copyright holder etc.

Copyright law has been emerged in a traditional context of printing technology and was functioning effectively and the users' ability to do with copyrighted content was also limited. But the introduction of digital technologies has presented new opportunities as well as challenges. Digital technology has made it possible for individuals to create and disseminate multiple copies of their works instantaneously and cost free[1]. It has also revolutionized the way in which copyrighted content could be used by the public; they may do anything with the content instantaneously and without any additional costs. The emergence of digital technologies and internet has opened up new modes of exploitation of works for the copyright owners. At the same time it has resulted in easier and fast unauthorized accessing and copying of copyrighted works. The advantages offered by the technology is ease of replication; every digital copy itself is perfect and that perfect copies can be made from other copies through endless generations,[2] another is ease with which the works could be manipulated and modified and dissemination of copyrighted content with no further production cost.

There felt an urgent need for an effective technology to curb those unauthorized practices of users with the copyrighted content. As a response to this, different technologies have emerged. Management of rights in the digital world is known as digital rights management (DRM) and technologies employed are known as DRM technologies. It is a broad term that refers to any technology and tools which have been specifically developed for managing digital rights or information. These technologies enable the copyright owners to control the activities with regard to their particular work. Egs. 'Read once', 'do not copy text' etc. Through the introduction/use of these technologies, the content owners are intended to make illegal copying harder and most costly. It is often used as a tool to reduce piracy in the digital world. Even though it started with this objective, with the passage of time, it started restricting the user to view access and use the content even for legally permitted activities.

New DRM technologies are being emerging on a daily basis. But like any other technology, this technology is also subject to circumvention. The creators wanted protection for these technologies employed by them so that anyone who circumventing the same would be punished. This resulted in this being incorporated in International agreements which deals with copyright[3].

Response of Indian Copyright Act

The Copyright Amendment Act, 2012 has added two new provisions, Section 65A[4] and 65 B[5] to the Act[6]. The prominent critique against introduction of this is that it is quite unnecessary in view of the fact that India is not yet a signatory to the international conventions which requires technological protection measures be protected by law.

Technological Protection Measure [TPM]

Section 65 A deals with protection against circumvention of technological measures. As per the Standing Committee Report[7], this Section has been introduced to provide for prevention of circumvention keeping in mind the public interest in access to works[8]. The Section is trying to balance the interest of both the copyright holder and the users of such works and the interpretation has to go in tune with this in mind.

This Section provides that if any person circumvents an effective technological measure used for the purpose of protecting any of the rights granted under the Copyright Act, with the intention of infringing such rights, the person shall be punished with imprisonment which may extend upto two years and shall also be fined.

Neither the term 'circumvention' nor 'effective technological measure' has been defined in the Act whereas the term has been defined in laws of other jurisdictions which give better clarity. The absence of clarification to these terms makes it difficult to make out whether the provision relates to access control or copy control. However, the wordings of the Section are to punish a person who circumvents for the purpose of *protecting any of the rights* conferred under Copyright Act. So a person who circumvents for the purpose of accessing the content can't be booked unless and until that person exercises any of the rights conferred under the Act. Further, the term 'technological measure' is preceded by the adjective 'effective' which means that the Section does not take into account all the technological measures but only the effective ones. However, no additional explanation is appended in the Section to identify the effective technological measure. The Standing Committee Report admits that different terms have been left undefined due to the complex nature of the technology, experiences from other countries which defined those terms etc. Responsibility has been handed over to the Judiciary to evolve law based on practical situations[9].

As per the Section, punishment is only for a person who circumvents the technological measure. Hence the activity sought to be caught is 'circumvention' and the punishment is only for the 'person' who actually does circumvention unlike similar provision in other jurisdictions which punishes the facilitators also. And the circumvention is to do an infringing activity. So circumvention

itself is not enough, it should be followed by an infringing activity[10].

Intention to circumvent for doing any infringing activity is another requirement of the Section. The burden of proof is on the copyright holder to prove that there is an intention to infringe the rights conferred to him under the Copyright Act. This was vehemently opposed by the industry associations which required that anyone circumventing the technology should be deemed to have circumvented the same with the intent to infringe copyright so as to shift the burden of proof to infringer[11].

The Section explicitly provides that this provision shall not prevent any person from doing anything referred to therein for a purpose not expressly prohibited by the Copyright Act. It also allows third parties to facilitate circumvention provided that such person maintains a compete record of the details of the person and the purpose for which circumvention was facilitated. Further, the Section specifically exempts circumvention of technological measures for the purpose of certain activities like encryption research, lawful investigation, security testing of a computer system or a computer network with the authorization of its owner or operator, protection of piracy and measures necessary in the interest of national security.

Section 65 A exempts persons who does it for the purpose of exercising acts which are not prohibited by the Act. This is a laudable provision and it goes in tune with the very objective of our Copyright law. Any third party making use of the exceptions and limitations permitted under the Act can break the lock in the form of technological measure and use the content. Even though an exception is provided, it is going to burden the legitimate users. It is not necessary and not possible that the users are aware of all circumvention technology and they have access to those technologies. The users has to get the concerned software and get the assistance of a qualified person which increases the costs of accessing the material[12]. The Act has not placed any obligation on the copyright holder in this regard to facilitate access to those who falls under the category of non-infringing users of copyright[13]. Further the copyright holder could lock the content even after expiry of the copyright over the content which puts the users into more trouble.

The industry associations are very enthusiastic in having such a provision and they wanted to make it more stringent by making it a cognizable and non bailable offence[14].

Rights Management Information [RMI]

Section 65 B deals with protection of rights management information. According to this Section, if any person knowingly removes or alters any rights management information without authority, such a person shall be imprisoned for upto two years and shall also be fined. Similar punishments are also prescribed for persons who distribute, import for distribution, broadcast, communicate to the public, copies of any work without any authority knowing that the right management information has been removed or altered without any authority. Civil remedies could also be availed in addition to the criminal remedies prescribed. The term 'rights management information' [RMI] has been

defined in the Act. As per the new definition clause, right management information includes title of the work, name of the author, and name of the owner of rights and terms and conditions of use of the copyrighted work[15]. Anyone who tampers with any of the information contained therein shall be punishable. The term RMI is used to identify information about the content. For example, if you play a track on your digital music player, it will typically display the title of the track and the performer on its screen[16].

Now it's a common practice of managing all the rights digitally. Parties are entering into online contracts and attempts have been noticed to remove these contractual terms from the digital copies of the work to prevent detecting the violations of the terms of the contract by the owner of copyright. This provision has also been enacted to prevent removal of the information regarding the management of rights included in the digital copies of the work[17]. Even though it has been enacted to address the issued relating to digital works, neither the definition of the term "RMI' nor Section 65 B limits its reach only to digital works. It could be applicable to any copyrighted work. For example, the removal of a title and copyright information from a novel can be taken as an attempt to remove authorship information[18].

Unlike the earlier provision there is no exception which is recognized for this provision. A stricter approach has been taken since both civil and criminal remedies are available for enforcing the rights. Clause (i) of Section lays down that any person who knowingly removes, alters any rights management information without authority is liable to punishment even if the alteration is for non-infringing purposes. One rationale for the stringent and exclusive provision is that tampering with this information has no other purpose rather than infringing the information.

Conclusion

As mentioned in the preceding portion, the first and foremost question posed is the necessity of these provisions in a developing economy like India which requires access without any hindrance. Having said this, on a comparative perspective, Indian law in this regard is much relaxed and has designed in accordance with the socio economic conditions of the country. Since the legislative guidelines are very vague, the Judiciary has a prominent role to play in construing the provision without compromising the access for users.

Another important issue is Copyright law's legality to encompass technological protection measures under its ambit. This is often cited as an unwanted expansion of the rights granted to a copyright holder. The objective of copyright law is to protect the creators and their works. The issue is whether it can be extended to protecting the 'locks' which are generally used by copyright holders to protect their works from being misused. Further, regarding RMI, the definition of the term includes subject matter which does not fall under the purview of Copyright. It goes to the extent of including the 'terms and conditions regarding the use of rights', 'the name and address of the owner of rights' within the purview of RMI.

The ever increasing menace of online piracy has been mooted as the real reason for including such provisions in the Act. However, recent research shows that the nature of piracy dominant in India is still by offline channels even though reports counteracting this are available prominently. One glancing through the internet usage data in India confirms this fact[19]. This also caution us to have a closer look at the ground realities and take appropriate remedies accordingly rather than following the other developed countries whose priorities and aspirations are different from ours.

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[5] 65A. Protection of technological measures (1) Any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine. (2) Nothing in sub-section (7) shall prevent any person from,- (a) doing anything referred to therein for a purpose not expressly prohibited by this Act: Provided that any person facilitating circumvention by another person of a technological measure for such a purpose shall maintain a complete record of such other person including his name, address and all relevant particulars necessary to identify him and the purpose for which he has been facilitated; or (b) doing anything necessary to conduct encryption research using a lawfully obtained encrypted copy; or (c) conducting any lawful investigation; or (d) doing anything necessary for the purpose of testing the security of a computer system or a computer network with the authorisation of its owner; or (e) operator; or (f) doing anything necessary to circumvent technological measures intended for identification or surveillance of a user; or (g) taking measures necessary in the interest of national security.

[6] 65B. Protection of Rights Management Information. Any person, who knowingly,- (i) removes or alters any rights management information without authority, or (ii) distributes, imports for distribution, broadcasts or communicates to the public, without authority, copies of any work, or performance knowing that electronic rights management information has been removed or altered without authority, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine: Provided that if the rights management information has been tampered with in any work, the owner of copyright in such work may also avail of civil remedies provided under Chapter XII against the persons indulging in such acts.

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DIGITAL MARKETING Vs TRADITIONAL MARKETING, WHICH ONE IS BETTER?

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Abstract

Many small businesses struggle with deciding which kind of marketing to do, because their budget will only stretch to one or the other, not both. The decisions that must be made are not easy, which method of marketing will give me the most bang for my buck? .To clarify the terms, the use of print ads on newspapers and magazines is a simple example of ***traditional marketing****. Other examples include flyers that are put in mailboxes, commercials both on TV and radio and billboards. On the other hand, when a business invests on building a website, advertising the brand name through different social media such as Facebook, Twitter and YouTube, this kind strategy is called* ***digital marketing****. Traditional marketing is not dead by any means. In fact, until magazines, newspapers and television go by the wayside, traditional marketing is here to stay albeit with some changes. But, the rising popularity of digital marketing has forced traditional marketing avenues to take notice and combine practices. Though digital marketing has advantages over traditional marketing, we should be fully aware of the marketing strategies and possible results of both before adopting a marketing plan. Both traditional and digital practices share similar goals attracting qualified customers and building brand awareness in our market. The right mix of digital and traditional marketing is better than the sum of its parts. Some businesses think of digital and traditional marketing as being at odds with each other, but in fact they can complement each other to meet your goals and get the best possible results .Of course, working for a digital marketing agency, I am somewhat biased to the benefits of digital marketing. But, some traditional practices still have their place so don't completely ignore the benefits. However, for the purposes of this post, here is a list of reasons why digital marketing trumps its predecessor.*

Even though traditional marketing still has its place in your marketing mix, it is diminishing in our digitally based world. For today's businesses, it is imperative to have a website and to use this technology as a means to interact with their consumer base. But, instead of thinking the decision is an either-or situation, we should look to capitalize on the strengths of both onlin and *traditional marketing. It is important to note that, although the communication channels and monitoring methods may differ, marketing is marketing regardless of whether it happens online or not. Marketers still need to think up great ways to market their products/services, and time and effort has to be invested into turning those ideas into workable plans. With the lines between digital and traditional marketing becoming more blurred as TV and radio (and many other "old fashioned" forms of communication) continues to evolve to meet the demands of their users, you must adapt your marketing practices to this new era. By no means am I saying to rid yourselves of those business cards or newspaper ads, but just realize that you must grasp some (or all) of the above concepts as we move forward in this technological age. No longer is it acceptable to just utilize traditional methods. integrating digital marketing practices into the mix will reap huge benefits in the long run.*

Introduction

The term *digital marketing* was first coined in the 1990s, but has been used in practice as early as the mid-1980s, when the SoftAd Group, now ChannelNet, developed advertising campaigns for automobile companies.

In 2000, a survey in the United Kingdom found that most retailers had not registered their own domain address.

Digital marketing became more sophisticated in the 2000s and the 2010s, when the proliferation of devices' capability to access digital media at almost any given time led to great growth. Statistics produced in 2012 and 2013 showed that digital marketing was still a growing field.

Digital marketing is often referred to as 'online marketing', 'internet marketing' or 'web marketing'. The term digital marketing has grown in popularity over time, particularly in certain countries. In the USA online marketing is still prevalent. In Italy, digital marketing is referred to as web marketing. In the UK and worldwide, however, digital marketing has become the most common term, especially after the year 2013.

Digital media growth is estimated at 4.5 trillion online ads served annually with digital media spend at 48% growth in 2010. An increasing portion of advertising stems from businesses employing Online Behavioural Advertising (OBA) to tailor advertising for internet users, but OBA raises.

Objective

- To study about traditional marketing vs digital marketing.
- How it help to the market.
- Which one is better.

Literature Review

Defining Traditional Marketing

There are many facets of **traditional marketing** and examples might include tangible items such as business cards, print ads in newspapers or magazines. It can also include posters, commercials on TV and radio, billboards and brochures. Traditional marketing is anything except digital means to brand your product or logo. Another overlooked means of traditional marketing is when people find a particular business through a referral or a network and eventually you build a rapport with them.

Defining Digital Marketing

The world of digital marketing continues to evolve and as long as technology continues to advance, digital marketing will as well. Examples of digital marketing include things like websites, social media mentions, YouTube videos, and banner ads. Specifically, digital marketing is similar to traditional advertising, but using digital devices. However, digital marketing is considered a form of inbound marketing and its goal is for people to find you. Businesses put content (or ads) out for individuals to find. People may conduct an organic online search, a paid search, **find your business on a social network** or by reading content that has been published online such as a blog or an article. The more they see you or your content, the more familiar they will become with your brand and they will eventually develop a trust and a rapport with you through this online presence.

Traditional Marketing's Advantages and Disadvantages

Because of its longevity, people are accustomed to traditional marketing. Finding ads in magazines and newspapers, or reading billboards are still familiar activities and people still do them all the time. Most of the time, traditional marketing is reaching only a local audience even though it is not limited to one. One of the primary disadvantages of traditional marketing is that the results are not easily measured, and in many cases cannot be measured at all. In most cases, traditional marketing is also more costly than digital marketing. And perhaps the biggest disadvantage today is that traditional marketing is static which means there is no way to interact with the audience. It's more like you are throwing information in front of people and hoping that they decide to take action.

Digital Marketing's Advantages and Disadvantages

One benefit to using digital marketing is that the results are much easier to measure; and another is that a digital campaign can reach an infinite audience. It is also possible to tailor a digital campaign to reach a local audience but it can also be used on the web and reach the entire globe when appropriate. Digital marketing is also a very interactive means of reaching an audience since it makes use of social outlets. There can be plenty of direct contact between the audience and the business which means that the business can get some very valuable consumer feedback. One of the disadvantages to using digital media marketing strategies is that it can take some time to realize measurable success.

Is there a realistic balance between the two?

The world has transitioned into a very digital environment. Not only are magazines going digital, we perform many of our daily tasks such as banking online and much of our reading is done on e-readers. Because of the rise of the digital age, it just seems like common sense to invest in a digital campaign. Even though traditional marketing still has a place, it is diminishing in our digitally based world. For today's businesses, it is imperative to have a website and use the web as a means to interact with their consumer base. There are some successful traditional marketing strategies, particularly if you are reaching a largely local audience, but it is important to take advantage of digital marketing so as to keep up in today's world.

How digital marketing helps business

These days, it's important to have a strong online presence, coupled with a great brand that is presented uniformly across all mediums. Digital marketing is an essential part of this for companies who want to utilise the power of the internet in order to boost business.

- 77% of people interact with brands on Facebook by looking at posts and updates
- 17% share news and experiences with others about the brand
- 13% post updates about brands they have connected with
- 56% said they would recommend a brand after becoming a fan on Facebook
- 34% of digital marketers have generated leads from Twitter
- 43% of all consumers who are internet-connected use social

A business should always pay attention to where its customers are, and those who have customers on the net with a strong online presence are more likely to succeed. This is even true of local businesses, as with mobile has come location services, making it easy for mobile users to find a company who uses maps on social and its website.

Comparison of Traditional Marketing with Digital Marketing

- Digital marketing is a very **economical** and **fast** way to promote your service/product/brand compared to the more expensive and time-consuming process of traditional marketing. A well-executed digital marketing strategy, for a reasonable monthly investment, can help your business **level the playing field** and compete against larger competitors. Often, a television campaign is outside the budget of most small businesses, and even a hard copy brochure printing can be pricey. Digital marketing scales … you can do as little or as much as you want to meet your budget.
- On the Internet, most of the time people can choose what to look at. Traditional marketing is usually forced upon someone – through your screen, mail or radio – which might not put people in the right mood to buy. Digital marketing is typically non-intrusive. Online, people have the choice to opt in or out of communications, and often it is relevant because they were the ones searching for it in the first place.
- Digital marketing has the ability to go **viral**. Using social media shares enables your message to be shared incredibly quickly.
- Online is **measurable**. It's not easy to know how many people heard your radio spots or read your newspaper ad, but you can find out exactly how many times your digital marketing messages were displayed and clicked, which web pages they visited and how long they stayed on your website. Not only is measuring the success of your digital campaign easy, you can get real time results and have the ability to modify the campaign to get the desired results.
- Digital is very useful for obtaining **worldwide visibility** in a much easier manner than traditional. But, it is also possible to tailor a digital campaign to reach a local audience only.
- **24/7, year-round exposure** with digital marketing which is not possible using traditional methods. You can reach an infinite audience.
- **Return on investment** (ROI) in a very short period with digital marketing.
- **Interactivity** with traditional practices is obviously absent. You are throwing information in front of people and hoping that they decide to take action. Digital utilizes social channels to increase engagement and interactivity. There can be plenty of direct contact between the audience and the business resulting in some very valuable feedback opportunities.
- You won't find a better medium for **building relationships** with customers than through digital marketing.

Traditional marketing is typically done one way. Digital marketing is a two-way street where the audience can contact you with messages, email and comments (social media). Using digital medium, you can interact with your customers on a personal level. Building relationships with your customers is very important, especially if you want customer loyalty.

- Traditional marketing offers a tangible product for your potential customer to hold and look at, and can reach people who don't use the Internet or social media. But, the number of worldwide Internet users in 2014 is a whopping 2.92 billion of the 7.17 billion people in the world today.
- You can **target** digital marketing. With a mail or television campaign, it's difficult to target people who are actually interested in your business – meaning your message falls on a lot of deaf ears. Digital marketing lets you start up a conversation with the people who actually care about your products/ services.

Benefits of Traditional Marketing

You can easily reach your target local audience. For example, a radio ad might play in one location: your city or region. Or mailbox flyers will go to households in a select number of suburbs.

The materials can be kept. The audience can have a hard copy of materials of which they can read or browse through over and over again.

It's easy to understand. It can be easily understood by most people because they are already exposed to this kind of strategy.

The Downside to Traditional Marketing

There is very little interaction between the medium used and the customers. It is more of providing information to the public that the brand exists with the hope of these people patronizing the brand.

Print or radio advertisements can be very costly. Printing materials can be expensive and you need to hire people to distribute these.

Results on this marketing strategy cannot easily be measured. Was the campaign successful?

Benefits of Digital Marketing

You can target a local audience, but also an international one. Further, you can tailor a campaign to specific audience demographics, such as gender, location, age and interests. This means your campaign will be more effective.

Your audience can choose how they want to receive your content. While one person likes to read a blog post, another person likes to watch a YouTube video. Traditional marketing doesn't give the audience a choice. Most people hate receiving sales flyers in their mailbox or phone calls at inconvenient times on stuff that they have little interest in. Online people get the choice to opt in or out of communications and often it are relevant because they were the ones searching for it in the first place. Don't underestimate the power of market segmentation and tailored marketing.

Interaction with your audience is possible with the use of social media networks. In fact, interaction is encouraged. Traditional marketing methods don't allow for audience interaction. You can encourage your prospects, clients and followers to take action, visit your website, read about your products and services, rate them, buy them and provide feedback which is visible to your market.

Digital marketing is cost-efficient. Though some invest on paid ads online; however, the cost is still cheaper compared to traditional marketing.

Data and results are easily recorded. With Google Analytics and the insights tools offered by most social media channels, you can check on your campaigns at any time. Unlike traditional marketing methods, you can see in real time what is or is not working for your business online and you can adapt very quickly to improve your results.

Level playing field: Any business can compete with any competitor regardless of size with a solid digital marketing strategy. Traditionally a smaller retailer would struggle to match the finesse of the fixtures and fittings of its larger competitors. Online, a crisp well thought out site with a smooth customer journey and fantastic service is king – not size.

Real time results: you don't have to wait weeks for a boost to your business like you would have to waiting for a fax or form to be returned. You can see the numbers of visitors to your site and its subscribers increase, peak trading times, conversion rates and much more at the touch of a button.

Brand Development: A well maintained website with quality content targeting the needs and adding value to your target audience can provide significant value and lead generation opportunities. The same can be said for utilizing social media channels and personalised email marketing.

Viral: how often do your sales flyers get passed around instantly by your customers and prospects? Online, using social media share buttons on your website, email and social media channels enables your message to be shared incredibly quickly. If you consider the average Facebook user has 190 friends of which an average of 12% see their liked posts – your one message has actually been seen by 15 new prospects. Now imagine a number of them also like and share your message and their friends do the same? That's why high-quality content is so important.

So which kind of marketing is better?

Well, we would recommend both. Obviously, we are passionate about digital marketing, because we know that it works. But we do use traditional marketing materials, too.

A 2009 study conducted by Bangor University and branding agency Millward Brown also used fMRI to study the different effects of paper and digital media.

Some of their key conclusions were:

- Physical material is more "real" to the brain. It has a meaning, and a place. It is better connected to memory because it engages with its spatial memory networks.

- Physical material involves more emotional processing, which is important for memory and brand associations.
- Physical materials produced more brain responses connected with internal feelings, suggesting greater "internalization" of the ads.

How We Use both Digital & Traditional Marketing

Our traditional marketing methods support our digital marketing efforts. The two do not operate in exclusion from each other. But we only use hard copy marketing materials to further strengthen a relationship with a contact, referral partner or client. We don't invest in television or radio ads, for example, but we will give brochures to someone who is interested in our services.

Rather than taking an all or nothing approach, it appears that a multi-channel approach that leverages the unique benefits of paper with the convenience and accessibility of digital will perform best.

Conclusion

Even though traditional marketing still has its place in your marketing mix, it is diminishing in our digitally based world. For today's businesses, it is imperative to have a website and to use this technology as a means to interact with their consumer base. But, instead of thinking the decision is an "either-or" situation, you should look to capitalize on the strengths of both online and traditional marketing. It is important to note that, although the communication channels and monitoring methods may differ, marketing is marketing regardless of whether it happens online or not. Marketers still need to think up great ways to market their products/services, and time and effort has to be invested into turning those ideas into workable plans. With the lines between digital and traditional marketing becoming more blurred as TV and radio (and many other "old fashioned" forms of communication) continues to evolve to meet the demands of their users, you must adapt your marketing practices to this new era.

By no means am I saying to rid yourselves of those business cards or newspaper ads, but just realize that you must grasp some (or all) of the above concepts as we move forward in this technological age. No longer is it acceptable to just utilize traditional methods … integrating digital marketing practices into the mix will reap huge benefits in the long run.

Reference

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DIGITAL INDIA AND SMALL-SCALE INDUSTRY

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Abstract

The Indian small and medium enterprise (SME) sector plays an important role in the economic growth of country. It is important due to its inherent advantages like low capital intensity, high employment generation capacity, regionally balanced development and even distribution of wealth and income. Globalization and lack of investments was a heavy blow to this sector which now takes another step forward in competing in the global business ecosystem with the advent of digitalization in India. SMEs can be benefitted from the government initiatives like Make in India, Skill India, Digital India, Mudra Bank etc which aims at supporting the MSMEs. Digital empowerment of citizens as a part of Digital India initiative emphasis on universal digital literacy and availability of digital resources/services in Indian languages. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme of the Ministry of Skill Development & Entrepreneurship (MSDE) is a skill certification scheme targeted to benefit 10 million people. This paper discusses the impacts of Digital transformations in the small-scale industries sector in the current business environment and how they are benefited from the same. The smart phone led connectivity reaching the nook and corner of India is another advantage that adds to the development of small scale industry. With the mobile applications gaining popularity in business world, the 40 million SMEs in India embraces the confidence to compete and grow in the digital market with its help. This paper analysis the overall benefits and challenges faced by small-scale industries sector in the context of Digital India.

Keywords
Digitalization, MSME (Medium small micro enterprises, Digital India, technology

Digital India and small-scale industry

Small scale industries are backbone of Indian Economy. They contribute to the development of the country by providing large employment with comparatively lower capital cost, by providing diverse range of products and services and by contributing a significant amount to GDP. In India contribution of MSME in GDP is 6%,33% in manufacturing sector and 45% in exports (MSME Annual report 2016-2017). But this sector is not rid of any challenges. Funding, managerial inefficiency, training and development, technology are few areas of them. The promotion of SSI is essential in developing economies like India to achieve equitable distribution of income & wealth, economic self-dependence & entrepreneurial development (Patil and Choudhary,2014). With the world moving ahead with scientific

advancements in a very fast pace, MSME s is left with a new ecosystem to survive in. As Digitalization steps in, MSMEs have to transform themselves to sustain their growth. Digital India aims at creating a knowledge-based economy, digitally empowering the society and opens new doors for the growth and development of country. The initiative gains momentum as Digital influence is increasing at a very high rate. India has 1.03 billion mobile subscriptions and 350 million internet users and their number is increasing at a very high rate. (TRAI and BCG – Google study, July 2016).Digital India aims to provide the much needed focus on the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services (Srivastava, 2017). Digital influence is an opportunity for SMES to explore the benefits of technology and in expanding their market. It is indeed a threat to those SMES which remain offline, as the big giants in the market will be take away their customers who prefers to be in online trade. Hence it is important for the SMEs to overcome the obstacles on the road to digitalization and be a part of the game, until it is too late. This paper discusses the relevance of MSME in the Indian economy, and their current status. Also, Digitalization in terms of benefits and threats to MSMES , The challenges in the Indian scenario, Initiatives taken by the government to improve the condition of MSMEs and in imparting digital literacy among the people. This study puts together suggestions to improve the growth and development of MSMEs in the Digital world.

Literature Review

Chandraiah and Vani(2014) conducted analytical study of prospectus and problems faced by MSMES in India. The study highlights Government policies towards MSMEs and problems of MSMEs. The study concludes that small scale industries have grown rapidly throughout the years and continues to be play a crucial role in the development of the nation.

According to Selvara and Balaikumar (2015),The objectives of SSI units are to bring about a balanced regional development, to tap the potential at the block level by promoting entrepreneurship, to generate employment and to induce personal savings. The focus on the development of SSIs sector began only during the Second Five Year Plan. A systematic programme for the development of the small-scale sector was formulated and there was also a concentration on the development of ancillary units during the second plan period.

According to Singh (2017), Impacts of digitalization includes increase in revenues, accessibility to wider customer base, operational efficiencies and enriched customer engagement. The challenges faced by Indian MSMEs on their road to digitalization are lack of knowledge about tech enabled devices, poor infrastructure and insufficient funds, inefficient regulatory frameworks, lack of knowledge of inherent technological capabilities and governance challenges.

According to a study conducted with Small scale industries in iran, main challenges of small and medium sized enterprises in exploiting of innovative opportunities are found to be , lack of training and development, inadequate education, national policy and regulatory, technological change, lack of markets information and lack of credits. Lack of educational background has the highest priority among the items and lack of sufficient market information, has the lowest priority.Farsi and Toghraee (2014)

Panda, Chhatar and Mharana(2013) concludes that India's heart lies in its villages, rural library can plays a much needed role not only in bridging digital divide but also in building a well informed and literate society

Priyadarshini padhi (2016) concludes that challenges like digital illiteracy, unawareness, digital divide, cyber security risks, less internet connectivity etc are existing and the same needs to be addressed to full fill the vision of Digital India project.

Srivastava(2017) in his study on Digital India critically analysis the impacts of Digital India initiatives on people and economy. The 3 key focus areas of Digital India are 1)Creation of Digital Infrastructure and Electronic Manufacturing in Native India. 2) Delivery of all Government Services electronically (E-Governance). 3) Digital Empowerment of Native Indian People. Paper examines various projects undertaken to implement this ideas which include, Digi Locker, MyGov.in, Bharatnet etc. Paper concludes that the 'Digital India' is in infant stage, so there is enormous unfinished agenda for India and it is an area of serious concern to address it effectively and expeditiously.

Digitalization-Opportunities for MSMEs

The US Institute of Museum and Library Services (IMLS) defines digitalization as ―the process of converting, creating, and maintaining books, art works, historical documents photos, journal, etc. in electronic representation so they can be viewed via computers and other devices. In business context, **Digitalization** is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities. It has gained popularity because of its advantages which include transparency in the system both governmental and business world, Ease of doing things (Reducing the paper work and manual follow up),direct feedback from customers, easy access to market, social media marketing, cost efficiency ,time saving etc.

MSME–Background and current status

MSME (Medium small mico enterprises) as emerged as a vibrant and dynamic sector of Indian economy (MSME Annual report 2016-2017). In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

1. **Manufacturing Enterprises-**he enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a

distinct name or character or use. The Manufacturing Enterprise are **defined in terms of investment in Plant & Machinery**.

2. **Service Enterprises:-**The enterprises engaged in providing or rendering of services and are **defined in terms of investment in equipment.**

Manufacturing Enterprises	**Investment in plant & machinery**
Micro Enterprises	Does not exceed twenty five lakh rupees
Small Enterprises	More than twenty five lakh rupees but does not exceed five crore rupees
Medium Enterprises	More than five crore rupees but does not exceed ten crore rupees
Services Enterprises	**Investment in equipment**
Micro Enterprises	Does not exceed ten lakh rupees:
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees
Medium Enterprises	More than two crore rupees but does not exceed five core rupees

The data related to the growth of MSME sector can be found from its percentage contribution to economy's GDP and the rate in which new industries are mushrooming in the country.

Year(base year 2011-12)	**MSME manufacturing sector in GDP(%)**	**MSME services sector in GDP(%)**	**Total contribution(%)**
2011-2012	6.16	23.81	29.97
2012-2013	6.27	24.13	30.4
2013-2014	6.27	24.37	30.64
2014-2015	6.11	24.63	30.74

.Section 8 of MSME act, 2006 provides for filing of Entrepreneur Memorandum-II with the District Industries Center (DIC). From 2015, EM-II is replaced by filing Udyog Aadhar Online filing system. In 2015 UAM filings was, 22,40,463 of which 89.43% belong to micro enterprises,10.176% to small scale industries and .39% belongs to medium scale industries. According to the statistics from MSME Annual report 2016-1017,It is clear that no:of new MSME units is increasing. Its a positive sign for the growth of India.

Year	**Number of EM filingd (in lakhs)**
2007-08	1.73
2008-09	1.93
2009-10	2.13
2010-2011	2.38
2011-12	2.82
2012-2013	3.23
2013-2014	3.63
2014-2015	4.25

The Literacy rate of the state has no direct relation with the no: of new MSME

that is emerging in the state. Since most of the MSME are based on unskilled labour, literacy rate of the citizens doesn't effect on it.

Top 5 States		
State	**UAM filing**	**Literacy rate**
Bihar	24.57	63.82
Uttar Pradesh	14.22	69.72
Tamil Nadu	10.52	80.33
Maharashtra	9.35	82.91
Gujarat	8.14	79.31

According to the latest report of economic survey, % share of establishments of industries has major contributions from 10 states. As we can see the literacy rate of rural India is less than urban India, but the no: of new establishments is more in rural India in states like Uttar Pradesh and Andhra Pradhesh.

State or union territory	**Literacy Rate (2011 census)**	**% share of Establishments**				
	Rural	**Urban**	**Total**	**Rural**	**urban**	**Total**
Karnataka	68.86	86.21	75.6	4.93	4.92	4.92
Madhya Pradesh	65.29	84.09	70.63	3.27	4.29	3.68
Uttar Pradesh	64.97	78.19	69.72	11.95	10.65	11.43
Andhra Pradesh	61.14	80.54	67.66	9.02	4.66	7.25
Rajasthan	62.34	80.73	67.06	5.33	4.39	4.95

One other thing to consider is that the growth of states is totally different from each other and needs special attention.

State or union territory	**Population (2018 estimates)**	**Literacy Rate (2011 census)**	**% share of Establishments**	**% share of employment**
Kerala	3,45,23,726	93.91	5.74	5.27
Maharashtra	12,31,74,918	82.91	10.49	11.05
Tamil Nadu	7,90,96,413	80.33	8.6	8.91
Gujarat	6,76,00,992	79.31	6.79	7.32
West Bengal	9,13,47,736	77.08	10.1	9.07
Karnataka	6,11,30,704	75.6	4.92	5.44
Madhya Pradesh	7,25,97,565	70.63	3.68	3.46
Uttar Pradesh	22,38,97,418	69.72	11.43	10.75
Andhra Pradesh	8,46,65,533	67.66	7.25	6.54
Rajasthan	7,59,84,317	67.06	4.95	4.77

Around 131.29 million persons were found employed in 58.5 million establishments. Out of the total 131.29 million persons, 67.89 million persons (51.71%) were employed in rural areas and Highlights of the Sixth Economic Census iii 63.4 million persons (48.29%) in urban areas. While employment in Own Account Establishments was of the order of 58.15 million persons (44.29%), the employment in establishments

with at least one hired worker was about 73.14 million persons (55.71%). Agricultural establishments provided employment to around 22.88 million persons (17.42%) and the non-agricultural establishments provided employment to around 108.41 million persons. (All India Report of 6th Economic census)

According to a study conducted by KMPG (2017) only 2% of the SMBs are engaged with technology. They use technology for selling and advertising online., 15% are enabled with technology which maintains less business online, but indeed have a website and cluster id tracked online. Again 15% is connected to technology which means they use internet for general things like collecting information etc. and a major portion of the SMBs, that is 68% are offline SMBs which don't have a computer and does not use social media etc.

Government Initiatives to overcome the Challenges

The main challenges that block the road to a digitalized MSMEs are1) Digital Illiteracy 2) Education3) Infrastructure4) Finance

Digital literacy is "The capability to use digital technology and knowing when and how to use it." (Rubble and Bailey (2007). In India 40% population is living below poverty line, illiteracy rate is more than 25-30% and digital literacy is almost no-existent among more than 90% of India's population(defindia.org)

Government of India has come up with many interesting initiatives under the flagship of Digital India program includes wide variety of useful mobile applications, online services and development programs. Agrimarket app, Bharat Broad Band Network (BBNL), Center for excellence for IT, CERT –IN, Crop insurance mobile app etc are few to name.

To tackle the financial Problems faced by MSME ,NABARD an acronym for The National Bank for Agriculture and Rural Development, was set up in July 1982 to make available credit support and services to the rural and farming segment of the country and also encouraging fair growth which is also sustainable. Small Industries Development Bank of India (SIDBI)was to launched in 1990 to lend money to the small and medium business as well as their development and promotion.in 2015, Government of India initiated the Pradhan Mantri Mudra Yojana (Micro Units Development & Refinance Agency Ltd), where loans are landed to micro entrepreneurs and individuals. Loans are provided under 3 categories Shishu providing loans up to 50,000, Kishore :covering loans from 50,000 to 5 lakh and Tarun providing loans above 5lack to 10 lakh. Loans can be availed from Commercial Banks, RRBs, Small Finance Banks, Cooperative Banks, MFIs and NBFCs which is under the Mudra scheme by filing application in mudramitra portel.

To provide Infrastructure facilities for all, Government of India has started setting up of National Optical Fiber Network (NOFN) to provide connectivity to 2.5 lakh Gram Panchayats of the country using optical fiber, which would ensure broadband connectivity with adequate bandwidth. This is to be achieved utilizing the existing optical fiber and extending it to the Gram Panchayats and

Bharat Broadband Network Limited (BBNL), is a special Purpose Vehicle (SPV), PSU set up under companies act by Govt of India under Rule 1956 has been registered on Feb 25, 2012 for management and Operation of NOFN. The target date for 2013 for the completion of National Fiber Optic network program has been extended to 2019.Also, with Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is designed to provide continuous power supply to the entire rural India.Public Internet Access program (PIAP) to make 250,000 CSCs operational at Gram Panchayat level for delivery of government services. It also aims to converts post office n to multi service centers.

To empower startups in the country, government initiated Start up India in 2016, through various programs like startup hub: a pit stop for the all the queries related to start ups, Patent Benefit: makes the patent filing process simple and easy., Fund of Funds: deals with funding the startups, Learning and development module: Provides interactive online course on entrepreneurship free of course and is open to all. Atal innovation mission: incubators are set up to find innovative solution for real life industrial problems. Tinkering Labs: Establishes link between industries and academia. Provides incubators /mini labs in schools to promote innovation. Other programs include opening incubators in selected technical institutes like IITs , opening research parks etc.

To improve Digital Literacy, Digital Saksharta Abhiyan or National Digital Literacy Mission (NDLM) Scheme was introduced. It provides IT training to 52.5 lakh persons, including Anganwadi, ASHA workers and authorised ration dealers in all the States/UTs across the country. The initiative aims at training non-IT literate citizens to become IT literate. NDLM National Digital Literacy mission programme is also initiated by the government to compliment the NOFN project objectives. This programme aims at providing Digital awareness, education and training for the rural people. The vision of DLM project as stated in the official website is "The vision of Digital Literacy Mission (DLM) is to create multi-stakeholder, consortium and work with government and their various schemes and agendas to showcase in some of those panchayats constituencies that how making them digitally literate can change the scenario of governance, empowerment, social inclusion, educational approach and employment."(http://defindia.org)

Skill Development is the need of the hour along with awareness and digital literacy. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE) to provide Skill Certification Scheme large number of Indian youth. industry-relevant skill training will provided to them. Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL). All this are done free of cost. It comes with other benefits as well like, Short term training, recognition of prior learning, monitoring and placement guidelines etc.

To increase market for MSMEs Government e-Marketplace (GeM) came

into being. GeM aims to enhance transparency, efficiency and speed in public procurement. It also provides the tools for direct purchase, e-bidding and reverse e-auction to facilitate the government users to achieve the best value for the money. The portal offers online registration facilities for all stakeholders namely Government Users, Product Sellers and Service Providers.

Conclusion

The Indian small and medium enterprise (SME) sector plays an important role in economic growth of country and is the solution for irradiation of poverty and unemployment in the nation. The digitalization of industries have many benefits from cost efficiency ,time consumption and increase in productivity. It is the need of the hour, to digitalize MSME to make use of the opportunities. Government of India has initiated many projects to tackle the challenges faced by MSME on their road to development. Although the process is slow, it can be concluded that MSME s get benefited from the same and adds to the development of the nation.

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SEARCH ENGINE OPTIMIZATION – A DIGITAL MARKETING TECHNIQUE

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Abstract

Search Engine Optimization (SEO) is important for websites to improve the rank for search results and get more page views requested by the user. This search engine ranks provide the better and optimized result to user, which will help them to view the popular page among the number of pages available in the search results. Apart from this search engine ranking, it also enables the websites to compete with other rival's website as each and every website owner expects to see their own website on the list before other's websites. This paper puts forward idea about SEO principles and basic strategies. It also expresses different techniques that are employed by search engines to improve its results.

Keywords

Search Engine Optimization (SEO), website, search engine

Introduction

Internet is a worldwide storehouse of information. Many websites are being added into it on a daily basis. That is, competitors for a website are increasing daily. Hence, main intention of a website owner is to make his/her webpage into a popular one among others. For that, the website must be different from other website. To bring out these differences, Search Engine Optimization tool is used. It is used by website owners to defeat its competitors by placing its link before others‟ website links in search engine's results. The job of filtering relevant and exact data from raw data is enrolled to search engines. That is why SEO has become an important topic for researchers, academicians and business organization.

SEO is a method used to bring our website in a search engine's unpaid results. Every business owners should keep in mind that everyone can influence the image of their companies via different electronic channels. So to get ahead with competitors owners must drop traditional marketing strategies and go on with the digital marketing techniques. SEO is such a tool preferred by many. Search Engine Optimization is typically a set of best practices that adopted by webmasters, web developers and web content producers to achieve a better ranking in search engine scenario [3]. SEO is related to Search Engine Marketing (SEM) that is driving the web traffic to the websites [2].

In this paper, the first section points the search engine optimization process. The second section deals with the SEO concepts, functions, segments and classifications.

Search engine optimization process

Now let us see the overall process of SEO for the effective implementation of SEO. The overall process is divided into the six phases, namely, research, reporting and goal setting, content building, webpage optimization, social and link building and maintaining progress report of SEO plan [1].

A. Research

This phase is performed in two steps namely *keyword analysis* and *competitive analysis.*

1) Keyword Analysis

In this step, we need to identify a set of keywords that will be used for optimization. Now from the set we can easily determine the frequently typed keywords in URLs. Or else use keyword finders to find the no. of occurrences of the keyword entered by users. The particular keyword with highest number of occurrences in search results will become the greatest competitor within the search results.

In some cases, keyword analysis may be on specificity of keywords. For example, if you want to buy „Lenovo Laptop", then instead of looking for all company's laptops (HP, Dell) you're interested in those laptops, which are having tag or brand as „Lenovo" and so in search URL"s instead of selecting general terms as „laptops", you need to enter more specific keyword as „Lenovo Laptop". More keyword specificity gives more accuracy in analysis results. As level of keyword specificity increases, the number of search results, which will be having the specified keyword will be decreases [3].

2) Competitive Analysis

To perform competitive analysis of websites, different parameters are considered such as, incoming and outgoing links, ranking of website on search results, number of visitors for the website, view rate or bounce rate, appearance of web contents on webpage etc.[3].Using these parameters he/she can understand the rank of his/her webpage on search engine.

B. Reporting and Goal Setting

This step mainly focuses on analyzing site's traffic. Site's traffic mainly depends on type of search engine, number of occurrences of keywords in search engine, popularity of web contents, number of visitors etc. [3]. Among these, most important factor is the number of outgoing and incoming links. A site with more outgoing links to other websites and incoming links from another websites will have more number of visitors. This will increase the bounce rate, which in turn, result in high traffic rate.

Depending on the previous phase outcome the goal identification and goal setting will be performed by SEO Review Committee (SRC). After that site's starting position is decided, then goals are set for the SEO plan [3].

C. Content Building

Content is King. A website with high quality content will be a great competitor for other websites. Always write a thorough content on our website. It mainly focuses on *content organization* and *content promotion.*

Content Organization: The content on your site should be organized in a logical way.

This is not only good for SEO; it also helps visitors on your site find other related content easily. (The longer they stay on your site, the better.)

Content Promotion: Increase visibility to new content you create by sharing it on social networks and building links to your content (both internally and from external sites).

D. Webpage Optimization

This phase considers activities required to improve the Graphical User Interface (GUI) of webpages. Along with the content, this also plays an important role in optimization. The webpage optimization is carried out in four steps, namely, webpage titles, web content exploration, prominence of targeted keyword phrases and site outline [3]. Let us see it in brief.

1) *Webpage Titles* – A webpage title must contain keywords which are already specified because most of the visitors will be searching the using that keyword. So, don't forget to add on the targeted phrases along with the company name.

2) *Web Content Exploration* – Web content include both text and images. Some search engines cannot deal with images in such cases we need to depend on web content explore. It will analyze the contents and find out the desired output. The quality of the web content explorer will decide the ranking/indexing of the website in search engine list [3].

3) *Prominence of Targeted Keyword Phrases* – Only the presence of targeted keyword will not increase the ranking of our page. The position of the targeted keyword is also important. For example, if the keyword is at the first paragraph of webpage, the weightage will be high than if the word is at second paragraph. Also, font size and font style of keywords will also give a positive impact on page's ranking.

4) *Site Outline* – The website user must be aware about all the list of links, which will direct them to the main webpage of the site. The list of all incoming and outgoing links will be stored at site map which in turn will increase the ranking of the website.

E. Social & Link Building

This phase consists of two steps, namely, using social media and calculating incoming and outgoing link ratio.

1) *Using Social Media*

In marketing, sharing of web contents through various social media provides number of options for organizations to establish a best customer relationship and also emphasize on other clients to use those social media for sharing of site contents and improves connectivity with other potential customers [1].

2) *Calculating Incoming and Outgoing Link Ratio*

A site with good quality content and quality outgoing and incoming links will attract more visitors. Google‟s Webmaster Tools provides information regarding the inbound/incoming and outbound/outgoing links to the site, which will have great impact on website optimization [1].

F. Maintaining Progress report of SEO Plan

Generally a progress report will be generated at the start and end of each SEO phase for analyzing the activities performed in a particular SEO phase. It will also give us information about the ranking of pages and parameters used for it.

SEO Concept

A. Segments of SEO

SEO has many segments. The main components are: Spider – It is browser-like program that download website pages [4].Crawler – It subsequently follows links on each website [5]. Indexer - It separates webpages downloaded by spider and crawler. Database– It is storage space for downloaded and organized pages. Results engine– extracts search outcomes and record items from the database. Web Server – It is the server that is accountable for communication between client and additional web crawler segments [6].

B. Functions of SEO

In order to get proficient results a number of activities are carried out such as
Crawling – Web Crawler is essential component of search engines or more specifically, searching activities which is used by all of us to find any information on the web [2]. These programs persistently work in the back-end in order to collect updated data from World Wide Web and store them in the large repositories or database which is used by search engines like Google, Bing, MSN, etc. in order to fulfill the search queries of global users [8].
Indexing – The process of keeping an indexed list of fetched pages and storing them into a database for further recovery.
Processing - On arrival of search request, internet engine processes it, compares and analyzes search string with listed and requested pages stored in database [6].

Retrieving Results – The final function is the finding of most appropriate and accurate page and displaying it on the browser.

There are two methods of optimization: *On – page SEO* and *Off – Page SEO*

On – page SEO – It handles good quality content, excellent keywords choice, keeping keywords on appropriate places, and assigning suitable title to each and every page.

Off – page SEO –It considers link structure, mounting link popularity by giving directories or indexes.

Page Rank Algorithm

Page Rank Algorithm was proposed by founders of Google Larry Page and Sergey Brin in 1996 [4][7]. This algorithm determines the rank of the web pages based on its importance. Page importance depends on the number of occurrences of the web page. Whereas mostly the page rank algorithm follows the link structure of web page to calculate the rank. Link structure of web page is mainly depends on the number of incoming and outgoing links for that web page [6]. Consider the pages A and B. A is having incoming link for B and B is having outgoing link for A. So to calculate the A‟s rank we require rank of B and to calculate

B‟s rank we require rank of A. If the page is having more number of incoming and outgoing links, then it is having highest vote or rank. A concept called „Page Dependency‟, which is used in Page Rank algorithm to calculate the page rank. This page rank depends on the rank of other pages that are linked to it.

C. SEO Classifications

SEO techniques are mainly of two types such as White Hat and Black Hat Techniques. White Hat techniques are those which are recommended as a good part of design by search engine companies whereas Black Hat techniques are not approved by search engines.

An SEO technique is considered white hat if it conforms to the search engines' guidelines and involves no deception. White hat SEO is not just about following guidelines, but is about ensuring that the content a search engine indexes and subsequently ranks is the same content a user will see. White hat advice is generally summed up as creating content for users, not for search engines, and then making that content easily accessible to the online "spider" algorithms, rather than attempting to trick the algorithm from its intended purpose. Various White Hat techniques are quality content, Internal Linking, Titles, Keywords, Inbound links etc.

Black hat SEO attempts to improve rankings in ways that are disapproved of by the search engines, or involve deception. One black hat technique uses text that is hidden, either as text colored similar to the background, in an invisible div, or positioned off screen. Another method gives a different page depending on whether the page is being requested by a human visitor or a search engine, a technique known as cloaking. Various Black Hat techniques are hidden text, link farms, keyword stuffing, scraping, paid links etc.

Conclusion

Still now, we have seen many topics regarding SEO. From this we understood that SEO is not just a small topic it‟s a wide area. To become an SEO expert so much effort is required. It‟s not that simple as we said it now.

As the world is emerging into a digitized tomorrow, its overtime to replace traditional marketing techniques with the digitized ones. SEO is a very powerful digital marketing tool that helps us to flourish our activities on Internet, a vast source of information. Wise use of SEO strategies will increase our business stability.

The right SEO can net you thousands of visitors and increased attention; the wrong moves can hide or bury your site deep in the search results where visibility is minimal. SEO also helps boost rankings so that content will be placed where searchers will more readily find it. The Internet is becoming increasingly competitive, and those companies who perform SEO will have a decided advantage in visitors and customers.

The world of SEO is complex, but most people can easily understand the basics. Even a small amount of knowledge can make a big difference.

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A STUDY ON DIGITAL DIVIDE IN TOURISM WITH SPECIAL REFERENCE TO MUNROE ISLAND

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Abstract

Tourism is an important wealth creator for national as well as local economy. Today, technology has a major role in hospitality and tourism. Most of the people use their smart phones and online services for exploring and booking their travel destinations. One of the parameters of assessing social development of a country is the extent to which there has been penetration of information and communications technology (ICT) through the Internet and mobile phone subscriptions. ICT can benefit the economy through increasing productivity gains only if people having access to the technology also have the requisite skills for making optimal use of it.

Even though technology has become more affordable and internet access among people has increased, a "digital divide" among people still exists due to various reasons. This study attempts to find the reasons for digital divide among people among Munroe Island who are offering hospitality and services to the tourists visiting the island. Also, it intends to find the role of internet and technology in tourism revenue at Munroe Island.

Keywords

Digital divide, tourism, Munroe Island

Introduction

In India, it is overtime to the need to bridge the gap in digital divide between the people. When it comes to the matter of a state like Kerala where 100% literacy among people prevails, it is very important to assure the digital literacy among people engaged in various activities or sectors. Also, Kerala is one of the most popular and attractive tourist destinations in the country. Kerala is an established destination for both domestic as well as foreign tourists and is popular for eco tourism. Kerala Tourism is noted for its innovative and market-focused ad campaigns. Internet and technology plays an important role in the tourism and hospitality sector. Both the customers and business can get benefit from the adoption of technology in tourism for effective communication, advertisements, reservations and other guest service systems. A proper ICT application helps in cost and time saving of both the customer and business. It eliminates middle man and intermediaries and at a lower cost, reach can be made to a large number of potential customers. For customers, it becomes easy

to compare the prices before making a selection.

Even though tourism in Kerala has got large attention, there are some places which are still un noticed because of lack of promotion and other factors. Kerala is well known for the back water destinations and eco tourism. Munroe Island is a beautiful piece of land which is composed of a cluster of 8 islands. Each of them is separated by small water channels and lakes. It is located about 27 km from Kollam. The place is named in honor of Resident Colonel John Munro, of the former Princely State of Travancore. He is said to have integrated several backwater regions by digging canals. Some of this island's main attractions are the narrow waterways, canal cruise and the famous Kallada Boat Race held here during the 10-day festival of Onam. It offers a unique and tranquil setting, far away from the constant chaos of modern life. The island village is a tourism experience where one can see the coir retting process, coir weaving, fishing, prawns feeding, migratory bird watch, narrow canals and coconut farms on the lake shore, lagoons, and mangrove plants. It is a place enriched with variety of flora and fauna.

When, internet became popular, the localites residing in tourist spots were the most benefited people. They were able to promote their hospitality in the form of home stays, transportations etc to a large number of potential customers. Munroe Island has also taken the advantage of ICT in promoting their hospitality for the tourists visiting their Island. But there exists a digital divide among the people in Munroe Island. This is mainly because of the lack of digital literacy programs. A proper diffusion of internet and technology can create better opportunities and potential customers for the localites' in Munroe Island which can in turn improve their standard of living too.

Digital Divide

With the advent of ICT, a new term has raised known as "digital divide". In general sense, digital divide is the gap among those who have access to digital technologies and those who don't have access to it. Initially, it referred with regard to the ownership of the computers, but today the term is used based on the knowledge of application in internet and technology. Digital divide is the ever-growing gap between those people and communities who have access to ICT and those who don't have it.

Review of Literature

Mathew and Cyriac (2002) in their study on "Tourism development and its impact on the economic development of Kerala" said that, tourism is basically a private sector activity and the role of government should be that of a facilitator by supporting it in the area of infrastructure. The study also revealed that the respondents were not satisfied with the support from the government agencies.

Cecchini & Raina (2003), in their study on 'Electronic government and the rural people: The case of Gyandoot' said that though the service satisfaction is high, the usage is low among the people. The telecentre is not able to reach the poorest people. Distance to the telecentre, lack of appropriate technology, inappropriate agents, lack of

community participation, ownership pattern, lack of awareness are the major drawbacks of Gyandoot according to them.

In a study of social diffusion of telecentre use in rural South India, Kumar & Best (2007) found that telecentres were being used only by a relatively small proportion of the village households. The users were, in general, young, male, school or college students, relatively more educated, belong to relatively higher income households, and come from socially and economically advanced communities. Thus the telecentres played a little role in bridging the existing socio-economic inequalities within these communities.

Sangeetha. P .V (2015) in her study titled "An assessment of bridging the digital divide through Akshaya telecentres in Kerala" found that age of the people have a role in awareness level in computer literacy. People belonging to lower age group have more awareness in ICT than older age group people. Also, it was found that men have more awareness regarding internet services than women.

Objectives

- To study the reasons for digital divide in Munroe Island among people providing hospitality services for tourists.
- To understand the effect of ICT in promoting tourism at Munroe island.

Significance and Scope

Application of internet and technology in tourism has gained popularity over the years, mainly because people find it convenient and easy to fix their destinations. A proper diffusion of ICT in tourism at Munroe can attract a wide range of potential customers. Customers can contact through electronic media and advance payment can also be made from any corner of the world without any middleman. The localites in Munroe can wisely market their home stays and boating services through online media and there by their standard of living can be increased.

Profile of the Respondents

The respondents are localites' and residents of Munroe Island who offer hospitality services such as boating, home stay, food, guidance etc to the tourists visiting Munroe Island.

Methodology

The study is primary in nature. The data has been collected through structured questionnaire. A sample size of 40 numbers of people is selected. Further the 40 is divided in to two groups of 20 each, out of which one group have access to ICT for promoting their hospitality service and the other group don't have access to ICT. Personal interview with tourists were conducted to gain familiarity with the topic.

Snow ball sampling method is adopted here for conducting the study.

Limitations of the Study

- Munroe is a small Island where there the number of people engaged in providing hospitality services to the tourists is less. Thus, the study is only based on small geographic area and sample size.

- The study is based on primary data, so the limitation of primary data will also affect the study, i.e. sometimes the informants/respondents are not serious in furnishing information.
- The concept of digital divide has much wider scope and meaning in the real sense. But in this study, the concept is limited to certain factors only.

Analysis & Interpretation

Table I Gender wise classification of respondents

	Access to ICT		No access to ICT		Total	
	No	%	No	%	No	%
Male	14	70	8	40	22	55
Female	6	30	12	60	18	45
Total	20	100	20	100	40	100

Table I shows that out of 40 respondents 55% of the respondents are male and 45% are female. From the table, it is clear that women are more in numbers in not having access to ICT.

Table II Income wise classification

Income Level	Access to ICT		No access to ICT		Total	
	No	%	No	%	No	%
Below10000	4	20	7	35	11	27.5
10001-20000	8	40	5	25	13	32.5
20001-30000	2	10	4	20	6	15
Above 30000	6	30	4	20	10	25
Total	20	100	20	100	40	100

Table II shows that 27.5% of respondents belong to the income group of below 10,000 per month, 32.5% belongs to the category of 10001-20000, 15% to 20001-30000 and 2.5% above 30000. It shows that people having access to ICT earns more income.

Table III Educational wise classification

Education	Access to ICT		No access to ICT		Total	
	No	%	No	%	No	%
Below SSLC	2	10	4	20	6	15
SSLC	4	20	8	40	12	30
Plus Two	4	20	4	20	8	20
Degree	8	40	2	10	10	25
Above degree	2	10	2	10	4	10
Total	20	100	20	100	40	100

Table III shows that 15% of the respondents are having an educational qualification below SSLC, 30% having SSLC, 20% respondents have plus two qualification, 25% have graduation and 10% above graduation level.

Table IV Age wise classification

Age	Access to ICT		No access to ICT		Total	
	No	%	No	%	No	%
Up to 35	8	40	2	10	10	25
35-45	5	25	2	10	7	17.5
45-55	5	25	8	40	13	32.5
Above 55	2	10	8	40	10	25
Total	20	100	20	100	40	100

Table IV shows that people belong to age group up to 35 are 25%, 35-45 are 17.5%, 45-55 are 32.5% and above 55 are 25% as respondents.

Table V Procedures for using ICT in hospitality

Procedure	No.	%
Simple	25	75
Complex	15	25

Table V shows that 75% believes the process of ICT application is simple and 15% considers the procedures as complex.

Table VI Factors considered for ICT application

Factors	No.	%
Trust	10	25
Network	3	7.5
Online banking	20	50
Tax	7	17.5

Table VI shows that 25% are concerned with trust, 7.5% with network, 50% on internet banking and 17.5% on tax concerns.

Findings

- Women have less access to ICT when compared to men.
- The income level increases with access to ICT
- Education is not a criterion for accessing ICT
- Young people have more access to ICT
- There are few number of people who believes that application of ICT is complex
- Majority of the people are concerned regarding online banking for diffusing ICT in their service.

Suggestions

- Digital literacy programs can be given to the local people for promoting their hospitality and services.
- Financial inclusion should be ensured.
- Tax benefits of home stays can be made aware to the localites.

Conclusion

While increasing penetration of digital technology by bridging the existing digital divides is associated with greater social progress of a country, it is also essential to build up the corresponding human capital necessary for making optimal use of the technology. ICT can benefit the economy through increasing productivity gains only if people having access to the technology also have the requisite skills for making optimal use of it.

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ROBOTICS IN LOGISTICS INDUSTRY

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Abstract

Logistics is a fast emerging industry which is the interplay of infrastructure, technology and new types of service providers of an economy. The growth in Robotics area made the mankind to work easily with maximum efficiency. The robotic innovations in logistics industry will make the industry an emerging sector of an economy. The basis of this research paper is to identify the technologies and robotic innovations present in our planet to work autonomously alongside workers and handling tasks in Logistics sector. One of the major challenges facing the logistic industry right now is the availability of labor, driven by the e-commerce revolution and its need for more rapid parcel shipments, and the shrinking size of the workforce in the western world. Several significant barriers to robot developments for logistics industry have started to disappear. Lack of enough funding for research and development for next-generation robots used to be a problem, but this is true no longer.. So from our study we can able to know about the robotic technologies for automation, which is easiest and cheapest to implement where there are easy and repetitive tasks. Although the use of robots in logistics remains in the initial stage and yet to make any significant impact, it is a real option to combat the challenge of labor availability in the industry. In 1954, George Charles Devol invented the first industrial robot, the Unimate. And that is why he considered as the father of robotics. So we can able to know from our study about the robotic operations, technologies, tools to implement which would reduce manpower with maximum efficiency.

Keywords
Robotics, workforce

Introduction

Distribution networks, across the entire global supply chain, require a high volume of varied and complicated tasks. This presents challenges for automation, which is easiest and cheapest to implement where there are easy and repetitive tasks. But new technology is overcoming these obstacles in logistics in a few distinct ways.

Several startup companies have been backed by venture capital investors to develop next generation robots using the research from university studies. Rethink Robotics is one such startup which has managed to raise $113 million in capital investment from venture capitalists just to develop and advance its current robot "Baxter". Fetch Robotics, another promising startup, has developed a robotic arm that drives around on a mobile

base to pick items from a regular warehouse shelf and place them into an order tote. So far, Fetch has raised around $23 million from venture capitalists.

Objective

- To study about the robotics in logistics industry.
- How it influence the logistics industry.

Robotics Applications in Logistics and Transportation

Container Loading and Unloading

Much of the goods consumed in America were at some point shipped in a standard container from overseas. Typically, these products aren't palletized, meaning they're stacked from floor to ceiling. The variation in products sizes and shapes has made automation of loading and unloading difficult until recently.

3D laser vision, coupled with new robotic software, can view different products in a container, determine the optimal loading or unloading sequence, and carry out this function with a high level of accuracy.

Stationary Piece Picking

In the warehouse, items are constantly being sorted. Often, it's simply a matter of moving a product from one box to another. Historically, piece picking has been difficult because robots weren't sure which items they were picking. Industrial robot arms, enabled by vision systems that can recognize which product is which, are able to handle this process in a stationary workcell. These robots boost efficiency and accuracy in the warehouse.

Custom Packaging

It is very difficult for a robot since it means working with different sizes and shapes of products, but also because it requires work to be completed around humans as opposed to inside of a work cell. This is where collaborative robots, designed to work safely around humans, have played a role in logistics.

Collaborative robots (cobots) have no sharp edges and shut down when they bump into something. In logistics applications, some collaborative robots can even be trained to do tasks by letting a human guide their arms once to learn the motion. This decreases inefficient programming time and speeds of the custom packaging process.

Robots are quickly making their way into the logistics and transportation sector. They're providing safety, efficiency and accuracy in a wide variety of applications, mostly involving work in the distribution center.

Trailer and Container Unloading Robots

In 2003 DHL and Its business and research partners worked to develop a new prototype – the Parcel Robot which consists essentially of the following components: a chassis, a telescopic conveyor belt, a 3D laser scanner, and a gripping system made up of an articulated robotic arm and a grabber .The robot is positioned in front of a container to unload and uses its laser to scan all of the boxes. An integrated computer then analyzes the various sizes of parcel and determines the optimal unloading sequence. The robot picks up a box and places it on a

conveyor that transports the item out of the container and into the sorting center.

Stationary Piece Picking Robots

A typical stationary industrial robot that is bolted inside a traditional robot work cell. The robot uses a camera to identify items in a plastic tote which has been delivered to the work cell by one large automated tote storage and retrieval systems. Once the robot has located an item, it picks the product up and places it on a small buffer conveyor that will ultimately deposit the item in a separate transport tote. This robot can pick up to 2,400 items per hour depending on product characteristics and order profile. Currently the system seems to work best with small rectangular products such as DVDs and pharmaceutical boxes.

Mobile Piece Picking Robots

It is mobile robot with an arm on top and a camera system that can navigate an existing warehouse and pick items from shelves and place them into an order tote. The system was first field tested in a pharmaceutical warehouse where it was able to pick test orders from 40 items that it had never seen before.69 The robot will be tested next in a more general goods warehouse where it will be integrated with a warehouse management system (WMS) for the first time and pick live orders.

Co-packing and Customization

Baxter is a collaborative robot and is designed to work safely around people. Its two arms are plastic; it has springs in its joints and sensors to shut off the arms if they hit something. There is a sensor in Baxter's head that scans around the robot causing it to slow down if people come close, and Baxter has three built-in cameras that it uses to identify and pick up objects. Baxter plug into a normal wall outlet and can be set up in minutes by someone with little or no training. Rethink Robotics can automatically download software updates to the robot as needed to improve its performance over time.

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A STUDY ON CHALLENGES AND PROSPECTS OF E-COMMERCE IN INDIA

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Abstract

E-commerce stands for electronic commerce. E-commerce means buying and selling products and services through electronic media. This paper attempts to highlight status of Indian E-Commerce industry and the different challenges faced by e-commerce in India and to understand various essential growth factors required for e-commerce business. This paper describes the different services and products offered by E-commerce to Customers. Ecommerce is showing tremendous business growth in our country. Increase in the number of internet users have also added to its growth.

Keywords

Ecommerce, Growth Factors, Challenges

Introduction

E-commerce is the present trend in the business world. E-Commerce stands for electronic commerce. E-commerce or E-business involves carrying on a business with the help of the internet and by using the information technology like Electronic Data Interchange (EDI). It means dealing in goods and services through the electronic media and internet. On the internet, it relates to a website of the vendor, who sells products or services directly to the customers from the portal using a digital shopping cart system and allows payment through credit card, debit card ,EFT (Electronic fund transfer) or on cash on delivery basis.

E-Commerce is the movement of business into the World Wide Web. E-Commerce has almost overnight become the dominant online activity. There is no single definition of E-Commerce, it means only commercial activity which is performed or linked to or supported by Electronic Communication. It facilitates new types of information based business processes for reaching and interacting with customers like online advertising and marketing, online order taking and online customer service. It can also reduce costs in managing orders and interacting with a wide range of intermediaries which add significant overheads to the cost of products and services. For developing countries like India, e-commerce offers considerable opportunities.

In India it is still in the nascent stage, but even the most pessimistic projections indicate a boom in this field. There has been a rise in the number of e-commerce companies in the past few years.

E-Commerce gives improved user experience, flexibility and control to users to buy a product or service when they are ready to purchase irrespective of time and location. This is the key for the growth of E-Commerce. Due to fast adoption of Internet enabled devices like smartphone and tablets we have seen an unparalleled growth in the E-Commerce sector.

Objectives of the study:

1) To explain the concept of E-Commerce.
2) To analyse the present trends of E-Commerce in India.
3) To study the various challenges and barriers faced by E-commerce in India.

Research methodology

Data sources:

The study is carried out with the help of secondary data, which is collected mainly from, books, journals, websites and other published materials.

Product or service based classification of E-commerce

Today the term e-commerce became so popular in Indian society and it has become an integral and inevitable part of our daily life. There are websites providing variety of products and services. E-commerce websites in India can be classified into two broad categories such as i) Multi Product E-Commerce and ii).Single Product E-Commerce.

A. Multi Product E-Commerce

Some internet portals provide almost all categories of goods and services in a single site; hence, they are targeting buyers of every possible product or service. The most popular example www.indiaplaza.com, www.thebestofindia.com, www.flipkart.com, www.Infibeam.com,www.rediff.com, www.indiatimes.com,www.ebay.in and so on. These Indian e-commerce portals provide goods and services in a variety of categories like; apparel and accessories for men and women, health and beauty products, books and magazines, computers and peripherals, consumer electronics, household appliances, jewellery, gift articles etc.

B. Single Product E-Commerce

Some Indian portals or websites deals with products in a specialized field, for example

(1) In Automobiles, the portals are http://www.indiacar.com and http://www. automartindia.com, http://www.okloot.com, http://www.carkhana.com.On these web sites we can buy and sell four-wheelers and two-wheelers, new as well as used vehicles, online. Some of the services they provide are; car research and reviews, online evaluation, technical specifications, vehicle insurance, vehicle finance, dealer locator etc.

(2) In Stock and Shares Markets some of the sites are http://www.equitymaster.com, http://www.5paisa.com. Some of the services offered to registered members are; Online buying or dealing of stocks and shares, market analysis and research, company information,

comparison of companies, research on equity and mutual funds, tracking market trends etc.

(3) In Real Estate, the portals like http://www.indiaproperties.com/,http://www .groffr.com http://www.fabfurnish.com. Many such websites facilitate online dealing in real estate. They offer either outright purchase or lease of a property through their portal. They provide information on new properties as well as for resale. One can deal directly with developers or builders or through consultant or brokers. Some of the allied services are housing finance, insurance companies, architects and interior designers, property management consultant services etc.

(4) In Travel and Tourism industry, India has a rich history and heritage and e-commerce is instrumental, to a large extent, in selling India as a product, encouraging Indians as well as foreigners to see its multifaceted culture and beauty. Major portals are http://www.tourisminindia.com/, http://www.Irctc.co.in, http://www.redbus.in, http://www.makemytrip.com etc. has a vast variety of information for a potential tourist. The tourist destination sites are categorized according to themes like: eco-themes pertains to jungles, flora and fauna, beaches of India, architectural attractions, forts and places, hill resorts, adventure-trekking, mountain climbing etc. Allied services offered are passport and visa, travel & accommodation information, weather information, festival and fair dates, shopping, tour operators and more. There are also sites that highlight the tourist destinations of a specific region in India, like http://www.incredibleindia.org/, which also covers North East India.

(5) In Gift Items: In the past days, one had to plan what to gift a loved one; so many visits to your favourite shop, and browse for hours before purchasing a gift. Today there are specific Indian websites making the act of gifting quick and easy to suit one's lifestyle. One such site is http://www.indiangiftsportal.com/ http://www. fernsnpetals.com, The gifts are categorized as collectibles like paintings and sculptures, toys & games, chocolates, flowers, wood-craft & metal craft, luxury items like leather goods, perfumes, jewellery boxes, etc.

(6) Hobbies: The most popular hobbies from time immemorial are reading, music and films. On the India website http://www. firstandsecond.com/ one can buy more than 300000 titles of books, cassettes, VCDs and DVDs. The book's cover a wide range of topics like business, art, cookery, engineering, children's stories, health, medicine etc. As for music and videos, they are available in English as well as in Indian languages to cater to the varied tastes and the topics range from devotional songs, old-time favourites and retro and jazz to the latest pop, rap etc.

(7) Matrimony: It is said that marriage is made in heaven, but in the world of e-commerce they are made on marriage portals like http://www.jeevansathi.com/ and http://saadi.com/, http://www.bharatmatrimony. Com. One can search for a suitable match on the websites by region of residence (India or abroad), religion or caste. Once registered with them, they have e-mail facility and chat rooms too, so that the couple gets to know more about each other before making the biggest decision of their lives. Other services in this segment are astrological services,

information on customs and rituals, legal issues, health and beauty etc.

(8) In the field of employment two major portals like www.monsterindia.com and www.naukri.com are instrumental in providing job seekers with suitable employment at the click of a mouse. They have directories categorized under headings employers and job-seekers. The service for job seekers is free and for employment they charge a nominal fee. Jobs are available online in fields, ranging from secretarial to software development, and from real estate to education.

India's e-Commerce ecosystem

Pros

- Growth of annual disposable income per household.
- Huge sales of PCs, tablets and smart phones.
- Growth in internet user base.
- Increase in the time spent online.
- Positive attitude towards transactions through credit and debit cards.
- Increase in the number of payment options.

Cons

- Low average broadband speed and flat average internet speed.
- Low penetration of credit and debit cards.
- Computer illiteracy.

India is developing rapidly and if development is to be measured, we cannot ignore the role of ecommerce in it. The internet user base in India might still be a mere 300 million which is much less when compared to its penetration in the US or UK but it is surely expanding at an alarming rate. The number of new entrants in this sphere is escalating daily and with growth rate reaching its zenith; it can be presumed that in years to come, customary retailers will feel the need to switch to online business. Insights into increasing demand for broadband services, rising standards of living, availability of wider product ranges, reduced prices and busy lifestyles reveal this fact more prominently thereby giving way to online deals on gift vouchers.

Indian Banks too have been very successful in adapting E-Commerce and Electronic Data Interchange (EDI) technologies to provide customers with real time account status, transfer of funds between current and checking accounts, stop payment facilities. ICICI Bank, Global Trust Bank and UTI Bank also have put their electronic banking over the internet facilities in place for the upcoming e-commerce market. Certain unique attributes of the E-commerce industry in India such as cash on delivery mode of payment and direct imports that lower costs considerably are probably going to bring about a speedy growth in this industry in years to come.

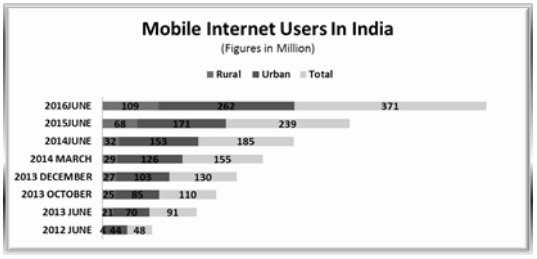
According to the latest research (The report, titled "Asia Pacific Online Retail Forecast, 2011 To 2016,") by Forrester, a leading global research and advisory firm, the e-commerce market in India is improving between 2012-2016. The report revealed that E-Commerce revenue in India will increase by more than five times by 2016, jumping from US$1.6 billion in 2012 to US$8.8 billion in 2016 .While US$8.8 billion is still less than other countries in Asia Pacific, such as China and Japan,

India's CAGR (Compound Annual Growth Rate) is much higher than these countries.

A recent pan-India report released by Com Score Inc reveals that online shopping in India has touched a growth rate of 18 per cent and is only likely to grow further. The report found that nearly 60 per cent of citizens in India visited a retail site in November 2011, with the number of online shoppers increasing by 18 per cent in the past year. E-commerce can become an integral part of sales strategy while it is one of the cheapest medium to reach out the new markets, if implemented successfully, it offer a smart way of expansion and doing e-commerce attribute to the successful implementation to carefully understanding the products and services, customers and the business process, easy-to-use system to extend the business on the web. A new report by the Boston Consulting Group says online retail in India could be a $84 billion industry by 2017 which is more than 10 times its worth in 2010 and will account for 4.5 per cent of total retail. The e-commerce platforms maximize its reach to the potential customers and provide them with a convenient, satisfying and secure shopping experience.

Presents Trends of E-Commerce in India

Chart 1: Showing Mobile Internet users in India

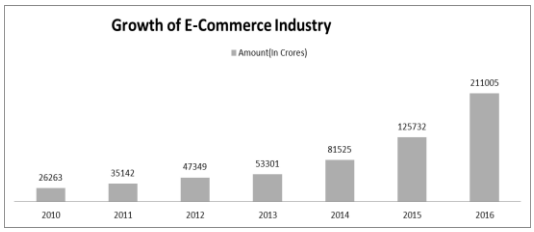


Source: Internet and Mobile Association of India (IAMAI)

Interpretation

As per the data of Internet and Mobile Association of India (IAMAI) total number of mobile internet users in India has increased tremendously i.e. from 48 Million in 2012 to 371 million in 2016.The Mobile Internet users in rural India was a mere 4 Million in 2012 which increased to 109 Million in 2016. Mobile Internet users in urban India has increased from 44 Million in 2012 to 262 Million in 2016

Chart 2: Showing growth of E-Commerce Industry in India

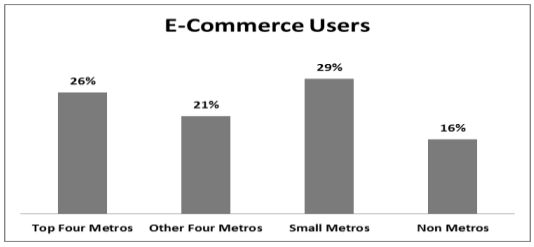


Source: Internet and Mobile Association of India (IAMAI)

Interpretation

As per the data of Internet and Mobile Association of India (IAMAI) the E-Commerce industry has grown from 26263 crores to 211005 crores in 2016 i.e. a growth of more than 800% growth.

Chart 3: Showing percentage of E-Commerce users in India

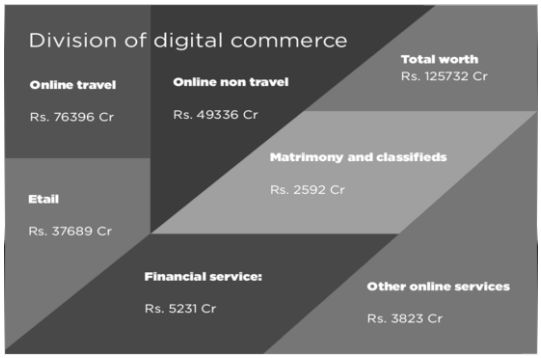


Interpretation

As per the data of Internet and Mobile Association of India (IAMAI) 29 percentage of customers from small metros, 26 percentage

of customers are from the top metro cities in India such as New Delhi, Mumbai, Kolkata and Chennai Internet,21 percentage of users are from other four metros and 16 percentage are from non-metros.

Chart 4: Showing division of E-Commerce in India

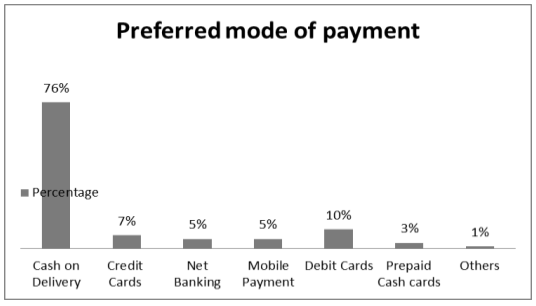


Source: Internet and Mobile Association of India (IAMAI)

Interpretation

As per the data of Internet and Mobile Association of India (IAMAI) online travel is the most preferred e-commerce segment, its net worth about 60 per cent of the total net worth of the e-commerce market.

Chart 4: Showing preferred mode of E-Commerce payment in India



Source: Internet and Mobile Association of India (IAMAI)

Interpretation

As per the data of Internet and Mobile Association of India (IAMAI) cash on delivery is the most preferred e-commerce payment option 76 percentage of business is done in this way.

Challenges of E-Commerce in India

Some of the infrastructural barriers responsible for slow growth of ecommerce in India are as follows. Some of these even present new business opportunities.

A. Payment Collection:

When get paid by net banking one has to end up giving a significant share of revenue (4% or more) even with a business of thin margin. Fraudulent charges, charge backs etc. all become merchant's responsibility and hence to be accounted for in the business model.

B. Logistics:

You have to deliver the product, safe and secure, in the hands of the right guy in right time frame. Regular post doesn't offer an acceptable service level; couriers have high charges and limited reach. Initially, you might have to take insurance for high value shipped articles increasing the cost.

C. Vendor Management:

However advanced system may be, vendor will have to come down and deal in an inefficient system for inventory management. This will slow down drastically. Most of them won't carry any digital data for their products. No nice looking photographs, no digital data sheet, no mechanism to check for daily prices, availability to keep your site updated.

D. Taxation:

Octroi, entry tax, VAT and lots of state specific forms which accompany them. This can be confusing at times with lots of exceptions and special rules. E. Limited internet access among customers and SMEs. F. Poor telecom and infrastructure for reliable connectivity. G. Multiple gaps in the current legal and regulatory framework. H. Multiple issues of trust and lack of payment gateways: privacy of personal and business data connected over the internet not assured; security and confidentiality of data not in place.

E. Other Reasons:

- Absence of e-Commerce laws
- Low entry barriers leading to reduced competitive advantages
- Rapidly changing business models
- Urban phenomenon
- Shortage of manpower
- Customer loyalty

Impact of Demonetization in E-Commerce

The recent demonetization drive of Government of India has impacted the e-commerce industry also. Cash on delivery forms anywhere between 70 and 90 per cent of e-commerce players' revenues and, hence, can impact valuations of retail e-commerce players. COD being a more preferred mode of payment for e-shoppers, the business has taken a hit atleast temporarily. With around 60-70% of orders being COD, retailers are complaining that the sales have come down by almost 20% in this category.

Conclusion

Several important phenomena are associated with e-commerce. E-Commerce has unleashed yet another revolution, which is changing the way businesses buy and sell products and services. New methodologies have evolved. The role of geographic distances in forming business relationships is reduced. E-Commerce is the future of shopping. E-commerce websites in India can be classified into two broad categories such as i) Multi Product E-Commerce and ii).Single Product E-Commerce. Single Product E-Commerce includes many categories such as Automobiles, Stock and Shares Markets, Real Estate, Travel and Tourism industry, Gift Items, Hobbies, Matrimony and employment services etc.

India's e-Commerce ecosystem has many favorable and few unfavorable aspects. Growth of annual disposable income per household, huge sales of personal computers, tablets and smart phones, growth in internet user base, increase in the time spent online, positive attitude towards transactions through credit and debit cards, increase in the number of payment options etc. are the pros of Indian e-commerce industry. Low average broadband speed and flat average internet speed, low penetration of credit and debit cards, computer illiteracy, poor logistics, complicated taxation system, absence of e-commerce laws, rapidly changing business models, shortage of manpower, problem with customer loyalty etc. are the challenges faced by Indian e-commerce industry.

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E-WASTE - A CHALLENGE FOR THE GROWING DIGITAL ECONOMY

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Abstract

The 21st century is a time where mostly all things are digitalized. Starting from storage and retrieval of data to ordering online, making online payments even remote control of machines using gadgets and systems. Hence we live in a digitalized economy where all sorts of gadgets and systems help us in achieving our day to day needs and wants but as all tools these gadgets and systems eventually ware off and are disposed by their owners. The more they use the more they dispose. As per the law of conservation of mass by Antoine Lavoisier (1785), matter in neither created more destroyed, it can only be transformed from one form to another. Hence said mobile phones, Smartphone's, PCs, TVs, MP3 players etc are transformed from E-tools to E-waste.

Electronic waste or E-waste contains many hazardous constituents that may negatively impact the environment and effect health if not properly managed. This paper presents e-waste scenarios in India, its disposal, recover, recycling drawbacks, environmental and health issues as a part on the growing digital economy. Based on the discussion various problems and needed changes for E-waste management in India are pointed out and suggested.

Keyword

E-waste management. Environmental and health impact, Digital economy, recycling.

Introduction

The electronic industry is the world's largest and quickest growing manufacturing industry (Radha, 2002; DIT, 2003). Throughout the last decade, it's assumed the role of providing a forceful leverage to the socio - economic and technological growth of a developing society. The consequence of its consumer oriented growth combined with rapid product obsolescence and technological advances are a new environmental challenge - the growing menace of "Electronics Waste" or "e waste" that consists of obsolete electronic devices. It's a rising problem as well as a business chance of increasing significance, given the volumes of e-waste being generated and also the content of both toxic and valuable materials in them.

The fraction as well as iron, copper, aluminum, gold and alternative metals in e-waste is over sixty percentage, while plastics account for about thirty percentage and also

the hazardous pollutants comprise only about 2.70% (Widmer et al., 2005).

Solid waste management, that is already a mammoth task in India, is becoming more complicated by the invasion of e-waste, significantly computer waste. E-waste from developed countries finds an easy way into developing countries like India in the name of trade (Toxics Link, 2004) is further complicating the problems associated with waste management.

Objective:

- To study about e-waste and its management scenario in India
- Impacts due to e-waste
- Effect of e-waste on the growing economy
- E-waste management strategies and suggested.

E-Waste in India

As there's no separate collection of e-waste in India, there's no clear information on the amount generated and disposed of every year and therefore the resulting extent of environmental risk. The preferred practice to get rid of obsolete electronic items in India is to get them in exchange from retailers when purchasing a brand new item. The business sector is estimated to account for seventy eight of all installed computers in India (Toxics Link, 2003). Obsolete computers from the business sector are sold by Auctions. Sometimes academic institutes or charitable establishments receive previous computers for reuse. It's calculable that the whole variety of obsolete personal computers emanating each year from business and individual households in India are going to be around 1.38 million. According to a report of Confederation of Indian Industries, the whole waste generated by obsolete or broken down electronic and electrical equipment in India has been calculable to be 1,46,000 tons per year (CII, 2006).

The results of a field survey conducted within the Madras, a metropolitan town of India to assess the average usage and lifetime of the private computers (PCs), tv (TV) and mobile phone showed that the average house usage of the laptop ranges from 0.39 to 1.70 depending on the income category (Shobbana Ramesh and Kurian Joseph, 2006). Within the case of TV it varied from 1.07 to 1.78 and for mobile phones it varied from 0.88 to 1.70. The low-income households use the laptop for 5.94 years, TV for 8.16 years and therefore the mobile phones for 2.34 years whereas; the upper income category uses the laptop for 3.21 years, TV for 5.13 years and mobile phones for 1.63 years. The growth rate of the mobile phones (80%) is incredibly high compared thereto of laptop (20%) and television (18%).about fifty percentage of the public are aware of environmental and health impacts of the electronic things. The willingness of public to pay for e-waste management ranges from 3.57% to 5.92% of the product cost for pc, 3.94 % to 5.95 eager for TV and 3.4 to 5 .95 percentage for the mobile phones.

Categorization:

Composition of the E-waste is very diverse and complex. E-waste contains more than 1,000 substances, which can be classified as hazardous and nonhazardous substances.

The electrical and electronic equipment can be broadly categorized into following categories (EU 2002):

1) Large household appliances (refrigerator, freezer, washing machine, cooking appliances, etc.)
2) Small household appliances (vacuum cleaners, watches, grinders, etc.)
3) IT and telecommunication equipment (PCs, printers, telephones, telephones, etc.)
4) Consumer equipment (TV, radio, video camera, amplifiers, etc.)
5) Lighting equipment (CFL, high intensity sodium lamp, etc.)
6) Electrical and electronic tools (drills, saws, sewing machine, etc.)
7) Toys, leisure, and sport equipment (computer/video games, electric trains, etc.)
8) Medical devices (with the exception of alland infected products radiotherapy equipment, cardiology, dialysis, nuclear medicine, etc.)
9) Monitoring and control instruments (smoke detector, heating regulators, thermostat, etc.)
10) Automatic dispensers (for hot drinks, money, hot and cold bottles, etc.) the main materials found in electric and electronic waste are ferrous material (38%), non-ferrous material (28%), plastic (19%), glass (4%), other including wood, rubber, ceramic, etc. (11%).

The Hindu: Matter of concern The rising levels of e-waste generation in India have been a matter of concern in recent years. With more than 100 crore mobile phones in circulation, nearly 25 per cent end up in e-waste annually, it said. "India has surely emerged as the second largest mobile market with 1.03 billion subscribers, but also the fifth largest producer of e-waste in the world, discarding roughly 18.5 lakh metric tons of electronic waste each year, with telecom equipment alone accounting for 12 per cent of the e-waste," the study said.

Impact of E-Waste

Electronic wastes will cause widespread environmental harm owing to the utilization of toxic materials in the manufacture of electronic merchandise (Mehra, 2004). Hazardous materials like lead, mercury and hexavalent chromium in one kind or the other are present in such wastes primarily consisting of cathode ray tubes (CRTs), printed board assemblies, Capacitors, Mercury switches and relays, Batteries, liquid crystal displays (LCDs), Cartridges from photocopying machines, Selenium drums (photocopier) and Electrolytes.

Though it's hardly known, e-waste contains toxic substances like Lead and cadmium in circuit boards; lead oxide and cadmium in monitor cathode ray Tubes (CRTs); Mercury in switches and flat screen monitors; cadmium in computer batteries; polychlorinated biphenyls (PCBs) in older capacitors and transformers; and brominated flame retardants on computer circuit boards, plastic casings, cables and polyvinyl chloride (PVC) cable insulation that releases extremely toxic dioxins and furans once burned to retrieve Copper from the wires. All electronic equipment's contain computer

circuit boards that are hazardous due to their content of lead (in solder), brominated flame retardants (typically 5-10 within sight weight) and antimony oxide, that is additionally present as a flame retardant (typically 1- 2% by weight) (Devi et al, 2004).

Landfilling of e wastes will cause the leaching of lead into the bottom water. If the CRT is crushed and burned, it emits toxic fumes into the air (Ramachandra and Saira, 2004). These products contain many rechargeable battery varieties, all of that contain deadly substances that can contaminate the surroundings once burned in incinerators or disposed of in landfills.

The cadmium from one mobile battery is enough to foul 600 m3 of water (Trick, 2002). The quantity of cadmium in landfill sites is significant, and considerable toxic contamination is caused by the inevitable medium and long-run effects of cadmium leaking into the surrounding soil (Envocare, 2001). Because plastics are extremely combustible, the printed wiring board and housings of electronic product contain brominated flame retardants, a number of that are clearly damaging to human health and also the surroundings.

Informal recycling:

The accumulated electronic and electrical waste in India is dismantled and sorted manually to fractions such as printed wiring boards, cathode ray tubes (CRT), cables, plastics, metals, condensers and others, these days priceless materials like batteries. It's a livelihood for unorganized recyclers and due to lack of awareness; they are risking their health and also the surroundings likewise. The valuable fractions are processed to directly reusable parts and to secondary raw materials In a type of refinement and conditioning processes.

No sophisticated machinery or personal protective instrumentation is employed for the extraction of various materials. All the work is finished by bare hands and solely with the assistance of hammers and screwdrivers. Children and women are routinely involved within the operations. Waste parts that doesn't have any merchandising or recycle value are openly burnt or disposed off in open dumps.CRT breaking operations end in injuries from cuts and acids used for removal of heavy metals and respiratory issues because of shredding, burning etc.

Working in poorly ventilated boxed areas without masks and technical in experience ends up in exposure to dangerous and slow poisoning chemicals. Polychlorinated biphenyls (PCBs) in older capacitors and transformers; and brominated flame retardants on computer circuit boards, plastic casings, cables and polyvinyl chloride (PVC) cable insulation will unleash extremely toxic dioxins and furans once burned to retrieve copper from the wires

Effects of E-Waste due to the Growing Digital Economy

Electronics for consumers are being treated like disposable things more and more each day. One major issue inflicting this trend is that companies are endlessly selling new technologies to us that effectively render recent products as obsolete.

- Improper Electronic Waste Disposal results in negative effects of E-waste on environment

Computers contain toxic materials like zinc, nickel, lead, barium and chromium, that is why it's vital to try to to correct computer recycling. Each of these metals occurs in concentrations that are higher than the federally regulated levels. Our growing stream of e-waste may be a threat to the environment. In 2005 an estimated 5.3 billion pounds of electronic waste was generated (EPA, 2005). Of this, solely nine percentages was recycled (Yadong et al., 2006). Once we retire our computers we've got four options: to recycle it, donate it, return it to the manufacturer or throw it in the trash. Most typically, we tend to throw it away.

- Effects of e-waste on surroundings Through Landfills

When we throw out our computers, they finally end up in landfills, causing the possibility of toxic metal leaching into the groundwater. Toxic metals in e-waste leach into our supply of resources, threatening their integrity. When e-waste is warm up, toxic chemicals are discharged in to the air, damaging the atmosphere. E-waste management may be a vital thought for future generations as proper electronic recycling is becoming tougher to seek out.

- Effects of E-waste on Environments in Third World Countries

E-waste adversely affects our developing nations. Rather than responsibly recycling our electronic devices, America sends our e-waste to these countries. The e-waste piles up within the landfills that cause damage to the surroundings in various ways. Toxins from the metals in electronics are released in to the atmosphere, and what's worse, once e-waste disposal isn't subsidized, the pollutants from our electronic waste will find itself in toys for our kids that are sent back to us. rather than exporting e-waste, or letting it rot in landfills, we are able to facilitate the environment by returning our electrical merchandise to stores and manufacturers, sending them to responsible recycling centers, selling them to people that can find them useful, or donating them to stores like Goodwill donation center.

- Poor E-Waste Management Effects information Security Through Improper information Destruction

Proper recycling and disposal of electronics isn't only necessary for the surroundings however it also has a massive impact on information security also. Once e-waste is disposed of improperly and without the use of a company that focuses on correct information destruction, there's a severe risk of fraud, information breaches and large liability for the companies concerned. before eliminating IT instrumentation improperly, always take into account all aspects, as well as information security and liability in addition to the environment.

E-Waste Management Scenario in India

Despite a large range of environmental legislation in India there aren't any specific laws or guidelines for electronic waste or computer waste (Devi et al., 2004). As per the hazardous Waste Rules (1989), e waste isn't treated as dangerous unless evidenced to have higher concentration of certain substances. Though PCBs and CRTs would always exceed these parameters, there are many grey areas that require to be addressed.

As the collection and re-cycling of electronic wastes is being done by the informal sector in the country at present, the government has taken the subsequent action/steps to boost awareness concerning environmentally sound management of electronic waste (CII, 2006):

- Several Workshops on Electronic Waste Management was unionized by the Central Pollution Control Board (CPCB) in collaboration with Toxics Link, CII etc.
- Action has been initiated by CPCB for fast assessment of the E-Waste generated in major cities of the country.
- A National working party has been established for formulating a method for E-Waste management.
- A comprehensive technical guide on "Environmental Management for information Technology industry in India" has been published and circulated wide by the Department of Information Technology (DIT), Ministry of Communication and information Technology.
- Demonstration projects have also been set up by the DIT at the Indian telephone Industries for recovery of copper from computer circuit Boards.

Although awareness and readiness for implementing improvements is increasing rapidly, the major obstacles to manage the e wastes safely and effectively remain. These include

- The lack of reliable knowledge that poses a challenge to policy makers wishing to design an e-waste management strategy and to an industry desire to create rational investment decisions.
- only a fraction of the e waste (estimated 10%) finds its way to recyclers due to absence of an efficient take back scheme for consumers, The lack of a safe e waste recycling infrastructure within the formal sector and therefore reliance on the capacities of the informal sector cause severe risks to the environment and human health.
- The existing e waste utilization systems are purely business-driven that have come about without any government intervention. Any development in these e waste sectors will have to be designed on the existing set-up because the waste collection and pre-processing are often handled efficiently by the informal sector, at the same time offer various job opportunities.

Waste Management Strategies

The best choice for handling E wastes is to cut back the quantity. Designers ought to make sure that the product is built for re-use, repair and/or upgradeability. Stress should be laid on use of less toxic, easily retrievable and reclaimable materials which may be taken back for refurbishment, remanufacturing, dismantling and reuse. Recycling and reusing of material are the next level of potential choices to cut back e-waste (Ramachandra and Saira, 2004). Recovery of metals, plastic, glass and different materials reduces the magnitude of e-waste. These

choices have a potential to conserve the energy and keep the environment free of harmful material that might otherwise have been released.

1. E-waste policy and regulation

The Policy shall address all problems starting from production and trade to final disposal, including technology transfers for the recycling of electronic waste. Clear regulative instruments, adequate to control both legal and illegal exports and imports of e-wastes and ensuring their environmentally sound management ought to be in place. There is conjointly a necessity to deal with the loop holes within the prevailing legal frame work to make sure that e – wastes from developed countries are not reaching the country for disposal. The Port and also the Custom authorities need to monitor these aspects. The laws ought to prohibit the disposal of e-wastes in municipal landfills and encourage owners and generators of e-wastes to properly recycle the wastes. Manufactures of products should be made financially, physically and lawfully liable for their products. Policies and laws that cover Design for Environment (DfE) and better management of restricted substances could also be enforced through measures like

- Specific product take-back obligations for industry
- Financial responsibility for actions and schemes
- Larger attention to the role of new product design
- Material and/or substance bans including stringent restrictions on certain substances
- Greater scrutiny of cross-border movements of Electrical and Electronic products and e-waste
- Increasing public awareness by labeling products as 'environmental hazard'

2. Extended producer responsibility

Extended producer responsibility (EPR) is an environmental policy approach during which a producer's responsibility for a product is extended to the postconsumer stage of the product's life cycle, as well as its final disposal. in essence, all the actors along the product chain share responsibility for the lifecycle environmental impacts of the entire product system. The greater the ability of the actor to influence the environmental impacts of the product system, the greater the share of responsibility for addressing those impacts should be. These actors are the consumers, the suppliers, and also the product manufacturers. Consumers will have an effect on the environmental impacts of merchandise in a very number of ways: via purchase choices (choosing environmentally friendly products), via maintenance and also the environmentally aware operation of products, and via careful disposal (e.g., separated disposal of appliances for recycling). Suppliers might have a major influence by providing manufacturers with environmentally friendly materials and elements. Manufacturers will reduce the life-cycle environmental impacts of their products through their influence on product design, material choices, manufacturing processes, product delivery, and product system support (Sergio and Tohru, 2005). The system design needs to be such there are checks and balances, especially to prevent

free riders. The goals of the product designer could include reducing toxicity, reducing energy use, streamlining product weight and materials, identifying opportunities for easier utilize, and more. Manufacturers have to improve the planning by: (i) the substitution of hazardous substances such as lead, mercury, cadmium, hexavalent chromium and certain brominated flame retardants;(ii) measures to facilitate identification and re-use of elements and materials, particularly plastics; and (iii) measures to push the utilization of recycled plastics in new products.

3. E-waste recycling

Many discarded machines contain usable elements that may well be salvaged and combined with alternative used equipment to create a working unit. it is labor intensive to remove, inspect and test components and then set up them into complete working machines. Institutional infrastructures, as well as e-waste collection, transportation, treatment, storage, recovery and disposal, need to be established, at national and/or regional levels for the environmentally sound management of e-wastes. These facilities should be approved by the regulative authorities and if required provided with appropriate incentives. Establishment of e-waste collection, exchange and recycling centers ought to be inspired in partnership with governments, NGOs and manufacturers.

Environmentally sound recycling of e-waste needs sophisticated technology and processes, which don't seem to be only very expensive, however additionally want specific skills and training for the operation. Proper use of complex materials needs the experience to recognize or determine the presence of dangerous or probably dangerous constituents as well as desirable constituents (i.e. those with recoverable value), and then be able to apply the company's capabilities and process systems to properly recycle each of those streams. Guidelines are to be developed for environmentally sound recycling of E Wastes. Private Sector is coming forward to invest in the e-waste projects once they are positive of the returns.

4. Capability building, coaching and awareness programs

The future of e-waste management depends not solely on the effectiveness of authorities, the operator of recycling services, however also on the attitude of citizens, and on the key role of manufactures and bulk consumers to shape and develop community participation. Lack of civic sense and awareness among city residents are a major hurdle to keep e- waste out of municipal waste stream. Collaborative campaigns are needed to sensitize the users and consumers should pay for use of electronic goods. Consumers are to be informed of their role in the system through a labeling requirement for items. Consumers to be educated to shop for only necessary merchandise that utilize some of the emerging technologies (i.e. lead-free, halogen-free, recycled plastics and from manufacturers or retailers that will `take-back' their product) to be identified through eco-labeling. Awareness raising programs and activities on problems associated with the environmentally sound management (ESM), health and safety aspects of e-wastes so as to

encourage higher management practices should be enforced for various target groups.

Conclusion

E-waste management has already become a mammoth task for the growing digital economy in Indian. It shows no sign of retreat but only hastily marching forward and if not controlled and monitored properly will turn the nation into a developing electronic waste dump yard.

There exists an urgent need for a detailed assessment of the current and future scenario including quantification, characteristics, existing disposal practices, environmental impacts etc. Industrial infrastructure including e-waste collection, transport, treatment, storage, recovery and disposal need to be established in national and regional levels. Establishment of e-waste collection, exchange, and recycling centers should be encouraged in partnership with private entrepreneurs and manufacturers. Policy level intervention should include development of e-waste regulation, control of import and export e-waste. An effective take-back providing incentives for producers to design products that are less wasteful, contain fewer toxic components, and are easier to disassemble, reuse, and recycle will definitely reduce the amount of e-waste generated. Schemes to encourage consumers to return old and damaged electronic devices when opting for new ones is a very effective e-waste management step that sadly is being followed only by a few manufacture and product owners, implementation of such schemes at most will help greatly. End- of-life management should be made a priority in the design of new electronic products.

Above all even though the majority has knowledge of the dark side of e-waste they tend to be oblivious until the problem reaches them face to face, so public awareness in mandatory above all as it is the first and the best step to reduce the quantity of e-waste produced in the country.

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CONSUMER BEHAVIOUR IN DIGITAL MARKETS: A REVIEW

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Abstract

Digital economy has opened new channels for selling of the products. The digital revolution has changed the market conditions of the businesses. Now in the era of digital economy, as the consumers in the digital market are more informed about the products and the opportunities they have, understanding the behaviour of their consumers in the digital economy has become imperative for the businesses. This paper is an attempt to understand the consumer behaviour in digital market by analyzing existing literature in the area.

Introduction

Digital economy has opened up unimaginable opportunities for the businesses to market their products (Wind & Mahajan, 2012). The buying and selling of the products are happening in the digital space. In this process, from the initial stage of consumer behaviour that is initiation of need of a product to post purchase behaviour happens in the digital space. This space where buying, selling, and marketing of products occurs digitally is called digital market. Hence in this era, there has been a paradigm shift from conventional marketing practices to digital marketing practices.

To cope with competition in the digital market, the businesses have to plan, formulate and execute innovative and novel digital marketing activities. For this, the businesses have to clearly identify and understand their consumers and their behaviour online. The consumers in the digital market are highly informed about the products, the product variants, and the alternatives in the market. Hence the consumer behaviour in a digital market is quite different from the consumer behaviour in the convention markets.

Discussion

The digital consumer behaviour research has become one of the sought out topic among researchers and practitioners recently. This is due to increased technology use. The use of social media has increased and the information from the social media plays a major influential role in consumer decision making. Consumer decision making process starts from identifying the need for the product, gathering the information about the product, comparison of alternatives, making final choice of the product, buying of the product and post purchase behaviour. In digital era, in each stage of the consumer decision making process the consumer is

influenced by the digital environment (Stephen, 2016). The studies from various parts of the world show that the consumer behaviour is highly impacted by their digital environment. The digital environment influences the consumer decision making process hence; a planned intervention in the environment helps us to target and place the product in the minds of consumers.

A study conducted by Smith, (2012) in southwest US University indicates that Millennials have a preference for certain forms of online advertising. They are motivated to make repeat visits to online websites and they write review about the products online. By taking these into consideration, online marketing strategies can be formulated targeting the millennials. The study also indicates that they are highly influenced by the online product reviews. Digital advertising should aim at millennials and make better advantage of it.

The digital markets reduce the costs of gathering and sharing information about the products before the purchase of the product. A study conducted by Tucker, C. E. (2014), among a sample of consumers in the US shows that consumers spend similar amounts of time online gathering information for both search goods (purchased online) and experience goods (goods bought from store), but there are important differences in the browsing and purchase behaviour of consumers for these two types of goods. The study also identified that experience goods involve greater depth (time per page) and lower breadth (total number of pages) of search than search goods. In addition, free riding (purchasing from a retailer other than the primary source of product information) is less frequent for experience than for search goods. Finally, the presence of product reviews from other consumers and multimedia that enable consumers to interact with products before purchase has a greater effect on consumer search and purchase behaviour for experience than for search goods.

A study conducted by Teo & Yeong, (2003) on consumer decision process in online context in Singapore shows that perceived risk has a negative relationship with consumers' overall evaluation of the product. The study also shows that overall evaluation of the product has a positive relationship with consumers' willingness to buy online. In addition, there is a positive relationship between perceived benefits of search and overall deal evaluation.

Conclusion

Understanding digital consumer behaviour is crucial for businesses in the current market environment. It is highly imperative that the businesses adopt innovative digital marketing practices by analyzing the digital consumer behaviour of their consumers. The studies in this area indicates that there is a significant relationship between consumer decision making process and consumer environment in a digital market.

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EMERGENT PROPERTIES OF BUSINESS GAME DESIGN ELEMENTS IN THE DIGITAL ECONOMY

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Abstract

Organizations are currently lacking in developing and implementing business systems in meaningful ways to motivate and engage their staff. This is particularly salient as the average employee spends eleven cumulative years of their life at work, less than one third of the workforce are actually engaged in their duties throughout their career. Such low levels of engagement are particularly prominent with younger employees, referred to as Generation Y (GenY), who are the least engaged of all groups at work. They will dedicate around five cumulative years of their life immersed playing video games such as 'Clash of Clans', whether for social, competitive, extrinsic, or intrinsic motivational factors. Using behavioural concepts derived from video games, and applying game design elements in business systems to motivate employees in the digital economy, is a concept which has come to be recognized as Business Game Design. Thus, the purpose of this research paper is to further our understanding of game design elements for business, and investigate their properties from design to implementation in gamified systems. Following a two year ethnographic style study with both a system development, and a communication agency largely staffed with GenY employees, findings suggest properties in game design elements are emergent and temporal in their instantiations.

Keywords

Business Game Design, Motivation, Digital Economy, Leaderboard, Self-Continuity.

1. Introduction

1.1 Digital Economy

Companies striving to embrace the digital economy (Skilton, 2015) have historically committed considerable resources into developing their business systems towards greater efficiency (Ciborra & Hanseth, 1998; Strader, Lin, & Shaw, 1998). This is particularly salient as organisations transition from relying on incumbent platforms, such as legacy ERP or CRM infrastructures as a source of competitive advantage towards implementing new and innovative internal business applications (Herzig, Ameling, & Schill, 2012). In this context, built on an architecture of dispersed, highly interconnected, always-on systems such as cloud-based corporate platforms, the digital economy affords businesses innovative opportunities to disrupt organisational processes and enhance their competitive advantage (Briscoe & Marinos, 2009; Skilton, 2015). Whilst focusing on elements of operational functionality (Ciborra, 2000),

organisations have largely neglected human-elements of motivation and engagement in the development and implementation of their business systems. Considering that two thirds of employees are either disengaged or actively disengaged in their work activities (O'Boyle & Harter, 2014), companies must also consider the challenges of staff motivation and engagement across their business systems. One novel approach to applying these dimensions in the digital economy is by leveraging certain highly engaging game design elements and game mechanics typically derived from video games (Thom, Millen, & DiMicco, 2012). In order to further understand the motivational properties of these game design elements, and what this may signify for business systems, in the following section I focus on one of the most successful games currently in circulation called 'Clash of Clans' and the significance with its users.

1.2 Generation 'Clash of Clans'

Clash of Clans originally developed by Finnish company Supercell (Carayannis & Rakhmatullin, 2014), is both outperforming and outranking in terms of downloads and active users, most other titles in the gaming industry, including Ill renowned Candy Crush Saga (Erturkoglu, Zhang, & Mao, 2015). The game's success is such that it has displaced traditional Massively Multiplayer Online Game (MMOG) behemoth World of Warcraft which held a record breaking 12 million users at its peak (Lee et al., 2011). In contrast, Supercell have an estimated 29 million active daily users across their gaming platforms, which in turn generate around $5 million in revenue each day (Cheng, 2014). This accessible and yet highly addictive strategy game represents a confounding success of mobile and gaming innovation in the digital economy. The largest segment of players in Clash of Clans comprise of Generation Y (GenY) participants (as shown in Figure 1). These individuals are highly adept with nascent technology, have grown to expect instant feedback, and espouse greater levels of self-determination (Connor et al., 2008; MacLeod & Clarke, 2009). Players immersed in Clash of Clans will also elect to dedicate anywhere between 30 minutes and 6 hours of gaming per day, whilst trying to earn virtual trophies, climb the leaderboard, and engage in battle quests (Supercell, 2014). However, these figures are in stark contrast to the levels of engagement and motivation of analogous employees in the workplace (O'Boyle & Harter, 2014). Thus, the game design elements employed to captivate and engage users in Clash of Clans, should be of significance for organisations wishing to engage their employees across their business systems in the digital economy.

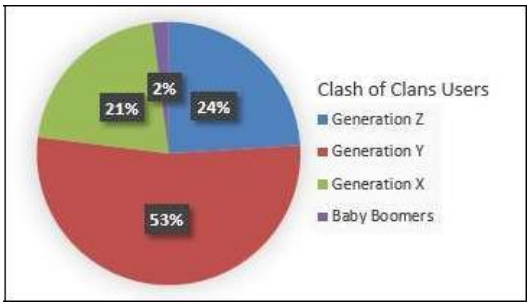

Figure 1: Clash of Clans by Gen. Identifier (adapted from newzoo data explorer)

1.3 The Disengaged Workforce

An overwhelming two thirds of staff are either not engaged or actively disengaged

whilst at work costing the UK economy between £52 and £70 billion in lost productivity each year (O'Boyle & Harter, 2014). Such is the problem that the UK Secretary of State for Business, initiated an investigation which lead to the 2009 MacLeod 'Engagement for Success' report (MacLeod & Clarke, 2009). One particular aspect of the document outlined that younger employees "*want more out of work than simply a wage packet at the end of the Iek*" (ibid, p.29). Furthermore, GenY workers represent the least engaged of all the groups in the workplace (Adkins, 2015). This is particularly problematic for organisations that rely on a growing number of younger graduate employees who are less "*willing to abandon that desire for self-determination when they enter work*" (MacLeod & Clarke, 2009, p. 29).

As illustrated in Clash of Clans, GenY will elect to dedicate a considerable amount of time actively participating across a number of interactive, social, collaborative and competitive activities whilst immersed in video games (McGonigal, 2011; Supercell, 2014). This poses a distinct challenge for companies on how to design and implement business systems that may motivate and engage GenY staff. In response to these challenges there is increasing evidence that organisations such as Delloitte, Capgemini, IBM, and SAP for example, are introducing game design elements into their business systems (El-Masri et al., 2015; Hamari, Koivisto, & Sarsa, 2014; Herzig et al., 2012). Ultimately, towards motivating and engaging their employees, particularly GenY, across a multitude of behavioural dimensions. This nascent process has come to be recognized as the 'Game Design' of internal employee business systems towards greater motivation and engagement across the enterprise.

In this section I have identified game design elements as particularly salient for business systems in order to motivate and engage, an otherwise disengaged generation of employees. Now a discussion on the conceptual background and understanding of Game Design is presented. Particular relevance is focused on the concepts of business Game Design and self-determination theory, followed by literary evidence of application in practice. The research and approach section outline the applied methodology followed by the analysis and findings. Finally the contributions are presented.

2. Conceptual Background

2.1 Understanding Game Design

Game Design refers to the idea of incorporating a variety of game design elements, mechanics, dynamics, and behavioural approaches typically derived from video games to non-game contexts (Burke, 2014; Deterding et al., 2011; Hamari, Huotari, & Tolvanen, 2015; Kapp, 2012). Implementing games outside of traditionally recognized leisure activities, such as in a work environment, in itself is not a new phenomenon. One of the most notable applications of this approach to date has been through 'Serious Games'. However the concept of Game Design should not be confused with serious games. Although some similarities can be drawn between serious games and Game Design, and the terms in some scholarly articles have been

used interchangeably (Richter, Raban, & Rafaeli, 2015), serious games and Game Design however are not one and the same (Landers et al., 2015). Serious games present an embodiment of a game, as in the virtual representation often delivered as a 3D construct built on the same architecture as video games (such as the Unity game engine) which encompass levels of interactivity through a graphic user interface (Petridis et al., 2010). Where a video game might be centred on leisurely pursuits (Wood, Griffiths, & Parke, 2007), serious games however are generally developed for educational and training purposes (Michael & Chen, 2005). Game Design, in contrast to serious games, is not generally supported by a fully stimulatory environment developed through a game engine. Instead it proposes the adoption of game design elements typically derived from video games and applied to non-game contexts (Deterding et al., 2011), towards eliciting customer or employee engagement (Herger, 2014; Zichermann & Cunningham, 2011).

2.2 Business Game Design

Whilst Game Design has been applied in a variety of organisational settings (Deterding, 2012; Khatib et al., 2011; King et al., 2013; Monu & Ralph, 2013; Singh, 2012), the concept itself can be delineated as either customer-focused or business-focused. Where a customer-focused approach to Game Design is adopted, game design elements are normally used to engage consumers across a number of marketing approaches (Huotari & Hamari, 2012; Paharia, 2013; Zichermann & Cunningham, 2011).

However where Game Design is used in a business environment, this is referred to as 'Business Game Design' or 'Enterprise Game Design' and is typically focused on engaging and motivating employees (Herger, 2014; Mollick & Rothbard, 2013; Penenberg, 2013; Reeves & Read, 2013). In this context, Game Design enables organisations focused on business issues, on providing meaningful methods in which to apply a range of motivational and engaging game design elements through their enterprise systems (Herzig et al., 2012; Rauch, 2013; Thom et al., 2012). The result and success of this type of Game Design can vary depending on how these elements are applied across business systems, and the context in which they are adopted (Thom et al., 2012). One such factor of success is by establishing greater levels of self-determination through the application of intrinsic and extrinsic motivational factors (Hamari et al., 2014; Muntean, 2011; Ryan & Deci, 2000).

2.3 Self-Determination Theory & Game Design

As outlined in the MacLeod report (2009), self-determination is a particularly important dimension for GenY in the workplace. The concept of self-determination has a long research history, predominantly through the work of Ryan & Deci (2000) attributing dimensions of Competence, Relatedness and Autonomy as basic universal human requirements towards greater self-continuity (Sani, 2010). Essentially, these dimensions seek to provide levels of mastery, connection and independence in supporting basic human psychological needs, whilst not necessarily disconnecting

individuals from collaborative activities (Deci & Vansteenkiste, 2004). Self-determination theory has more recently been the focus of human engagement and motivation research through the exploration of intrinsic and extrinsic values in gamified systems (Hamari et al., 2014; Nicholson, 2012). Engagement and motivation in self-determination theory state that, greater the levels of intrinsic motivation, as in an internalised or emotional stimuli, the greater the pull towards completing an activity (Ryan & Deci, 2000). In contrast, where activities are inherently driven by extrinsic motivation, these may motivate in the short-term but can also have a detrimental effect on the long term intrinsic motivational factors of an activity. Having reviewed the conceptual background to business Game Design, I now outline our methodological approach and the context of our empirical research.

3. Approach & Context

3.1 Data Collection

This paper draws on ethnographic data collected over two years from both a system development, and a communication agency with a largely GenY workforce. From the onset of the research process, the agency was operating in a market with progressively diminishing margins, and required new and innovative ways to motivate and engage its employees towards increasing its competitive advantage. The researcher was able to observe and capture both the development and implementation of this gamified business system throughout the two years of fieldwork, during which the following key research question was examined; *If Game Design is the use of game design elements in a non-game context, what are the properties of game design elements in gamified business systems*? The process of the project endeavoured both the system developer and the communication agency to work together in developing various strategies, game mechanics and game design elements. These would be implemented into a gamified business system that would not only facilitate the effective support of key business processes for the agency, but also provide a highly innovative and engaging platform for their employees.

4. Analysis & Findings

4.1 Self-Continuity

In this analysis I focus on the emergent properties of one of the most prominent game design element in the agency's gamified business systems. I use the concept of self-continuity (Sani, 2010) to specifically focus on a distinct game design element which embodies the reflection of the 'self' over time. This is particularly important as self-continuity elements can be recognised by individual achievements, badges, trophies, or evolutionary aspects of an online profile in a gamified business system or video game. For example one of the most prominent game design elements of self-continuity in the Clash of Clan video game, is through the leaderboard system (as show in Figure 2).

Figure 2: Clash of Clans Leaderboard System

Self-continuity in this context, represents the projection of the person's various achievements, goals and online profile over time. Social psychologist, Professor Sani states that "*I have a sense of self-continuity because inside us there truly is something that corresponds to a continuous self, something that is the subject of all our experiences*" (2010, p. 1). In the context of our empirical study I use this interpretation of self-continuity to identify the agency's Leaderboard system as a particularly salient game design element, and its significance for individual employees perpetuated with the self over time.

4.2 Leaderboard

The agency's Leaderboard system offers a visual representation of the top tier of system users identified as highflyers. Every time an employee logs into the gamified enterprise system, on the right side of the screen, prominently positioned is the leaderboard listing top achievers in a number of categories. Some of the metrics used in calculating the position of employees on the leaderboard are through various mechanics, dynamics and collaborative or participatory endeavours. The mechanics and rules which mediate the leaderboard system are such that all accumulated points are levelled at the end of the calendar year for every single employee in the company. This innovative game mechanic emerged from the design process, when the system developer and agency debated how to keep employees engaged throughout the leaderboard system. For example, when a number of highflyers Ire found to be consistently at the top of the leaderboard, this in turn proved challenging for other staff to gain recognition for their activities. Hitherto there was very little incentive for other staff to engage with the leaderboard system.

4.3 Motivational Properties

What transpires from our analysis is that the motivational properties of the leaderboard are much higher for employees who engage with the gamified business system nearer the start of the calendar year. This is especially significant as this is when all active employees essentially commence their journey together through the digital infrastructure, as everyone's points begin variably at the same level. This provides an element of commonality and community, and reinforces the cultural ethos of '*I are in*

this together', which the agency tries to foster towards synergised collaboration through the business system. Everyone starts the game with the same abilities and opportunities at that stage, and the empirical evidence suggest that during this period, the motivational properties through the leaderboard system are very high. Individual employees are hoping to get recognised and gain *kudos* from their colleagues. However when running the same analysis with employees who join the company at a later stage the findings reveal different engagement properties.

4.4 Emerging Affordance

The agency employ new staff at different times of the year, as it is sensible to recognise that businesses generally do not only recruit new staff at year start. Staffing is a constant organisational process due to factors such as expansion, new projects or natural attrition. When analysing specific interviews with employees who joined the agency mid-term, a common theme of disengagement with the leaderboard system emerges. For example in one case an employee joined the company in September, at that stage the leaderboard highflyers Ire Ill established having earned points and rewards for their activities across the gamified business system during the previous eight months.

In this case the employee's engagement with the leaderboard system was very low.

"*…there's no incentive for me to try and climb the leaderboard, have you seen where [name anonymised] is, look at how many [points] he has, how am I going to beat that?*

The challenge in earning enough points to get listed in any meaningful way on the system by employees joining mid-term, and therefore have their work activities and engagement with the gamified business system recognised, is perceived as being unsurmountable through the leaderboard. In this case a low level of engagement is afforded by properties of that game design element over time, which not only has the counterintuitive effect of disengaging certain members, but also impacts overall self-continuity of individual employees. Here, the leaderboard offers varying degrees of motivation and engagement depending on its temporal context rather than its situational setting. This analysis into the leaderboard provides us with an insight into the emergent properties of game design elements from the design process, to the affordance betIen the employee and the gamified business system. These emergent properties are also found to originate from the design process, but also from the rules and engagement pull factor instantiated from the activities by colleagues within this business system.

4.5 Temporal Dimensions

Through our analysis the empirical data suggests temporal dimensions for game design elements in a gamified business system. Where a game element which provides the same function over time may be perceived differently and therefore affects the levels of motivation and ultimately the levels of employee engagement through the business system. This analysis offers implications in our understanding of the role and impact of game design elements for levels of employee engagement through a gamified business system.

5. Contributions

5.1 Limitations

Although this research provides an insight into understanding game design element properties in a gamified business system, it is not without limitations. Using self-continuity I analysed a specific game design element over time, however further research might engage in a wider analysis of congruent elements.

5.2 Emergent Properties

In this particular study, our findings suggests that game design elements exhibit emergent properties which can be situated in both the design and development process, but also by the instantiation from the activities of the users. These implications for practice provide a particularly salient insight into the emergent properties of game design element, where stakeholders tasked with developing specific elements of engagement as part of a wider business system, may not foresee the actual levels of engagement or motivational affordance. For research, this alludes to a continual and evolving process of examining properties of game design elements, and also how these can exhibit alternative emergent properties beyond their original design.

5.3 Implications

In summary, our contributions for knowledge in this research suggest that game design elements not only exhibit alternative emergent properties as a result of the interactions through the activities they support, but also how these mediate levels of motivation and engagement with a business system. This is prominent for practice, where organisations facing challenges in better engaging and motivating their workforce (Burke, 2014; Deterding, 2012; O'Boyle & Harter, 2014; Rauch, 2013), need to respond to system design challenges (Zhang, 2008). I therefore conclude by suggesting a dimension of *emergence* of game design elements, in the Game Design of business systems to engage the workforce in the digital age.

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