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3rd International Conference on "MICROFINANCE & DIGITAL ECONOMY - OPPORTUNITIES AND CHALLENGES" (IC-MFDEOC 2020)

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E D I T O R I A L

*It is a matter of great pride and pleasure for us to host the **3rd International Conference on "Microfinance & Digital Economy – Opportunities and Challenges (IC-MFDEOC) 2020"** organized by Jagran Institute of Management, Kanpur on **Thursday 20th of August 2020**.*

*The theme of the Conference is **"Microfinance & Digital Economy – Opportunities and Challenges".** Microfinance is a category of financial services undergoing significant changes due to digitalization. Digitalization is originating a big transformation by bringing a new wave of global changes in modification of products and services of microfinance. Regulatory bodies are tightening up with the help of digital technology and creating a more transparent system. The ways and means of borrowing and lending have undergone a pacific change in the decades gone. Processing of banking, micro credits and access to other financial services is now more speedy, accurate and effortless with the use of digital technologies. The ultimate goal of microfinance is to give people an opportunity to become self-sufficient by inculcating habit of savings, entrepreneurship and assisting employment.*

The organizers of the Conference and Conveners have tried to give this Conference stature where in many research papers have been received from different parts of the country and world. Submissions in the form of empirical, conceptual, practitioner's papers and case studies have been invited, which address various issues related toMicrofinance and Digital Economy. All submissions are subject to a blind review process. Due to short span of time and pandemic outbreak COVID-19 we received 55papers and after a critical blind peer review process, 28 verified papers have been published in Journal and some others are invited for presentations.

In the Inaugural Session of the Conference International and National Guest Speakers shared their experiences Mr. Antarpreet Singh, Director Digital Learning, Indian School of Business Hyderabad, Dr. Trevor Mendis - University of Sri Jayewardenepura, Colombo, Srilanka, Prof. Nadezhda Y. Zinkovich - Synergy University, Russia, Prof. Arvind Astha - Burgundy School of Business Dijon, France, addressed the gathering. Technical session chaired by Dr. Ajay Trivedi - Dept. of Commerce & Management Parul University, Vadodara, Gujarat, Dr. Renu Jain – Dept. of Computer Science and Engineering, CSJM University, Kanpur

We feel privileged in thanking all those who have helped us in making this Conference successful. From every little gesture of help to grand support, each action is acknowledged. Special thanks to respected Chairman, Vice-Chairperson and CEO of Jagran Education Foundation for their enormous support, motivation and guidance.

We wish you all to learn, gather and make memories worth remembering. We wish each one of you a very successful year ahead and look forward to meet again to make unforgettable moments.

Dr. Divya Chowdhry	**Dr. Anil Kumar Singh**	**Dr. Nidhi Mathur**
(Director-JIM & Conference Convener)	*(Associate Professor & Conference Co-Convener)*	*(Assistant Professor& Conference Co-Convener)*

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CONTENTS

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Concept Paper on Community Development in Rural Sector in Sri Lanka

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ABSTRACT

The rural sector represents about 65% of the Sri Lankan population and plays a pivotal role not only in economic dimension but also from other sociological arenas such as education, standard of living, income distribution and poverty, as well as politics and governance. Hence the survival, growth and sustainability of the rural sector becomes crucial. In this aspect having a sustainable community development process congruent with the domestic culture and context has become of paramount importance. Hence this Concept Paper focuses on Community Development in the rural sector in Sri Lanka.

Aims and Objectives: *This concept paper focuses to introduce a sustainable model for community development in Sri Lankbased on literature.*

Literature Review: *The proposed Conceptual Framework was derived upon thorough literature review and the theoretical underpinning.*

Methodology: *The suggested methodology is on "Interpretivism" research paradigm with "Theoretical Normative Perspective".*

Keywords: Community Development, Sustainability, Rural Sector, Livelihood, Networking and Skills.

1. INTRODUCTION

The rural sector represents about 65% of the Sri Lanka population (Statistics and Census, 2016; (Noordeen and Salgado, 2019).) Hence the socio-economic dynamic of the rural community plays a pivotal role in the Sri Lankan economy, and the improvement of the living standards of the rural sector will have a direct impact on the economy of a nation (Kapur, 2019). In the absence of proper and well-articulated policy framework for the cottage industry in Sri Lanka, the rural sector has been basically ignored. As a result, the poverty levels are increasing with lowering standard of living, creating further connected issues such as lack of education, lack of access to health and sanitary requirements and increased crime rates.Policy formulation for rural sector includes the collection of public programs to enhance, improve, and revitalize non-urban and non-metropolitan areas (Blair, Dichert and Drozd, 2008).

In this aspect, Community Development (CD) becomes vital to develop the rural sector in Sri Lanka. Community Development (CD)is defined as a support system for communities, giving place and identity, to use their own assets to improve the quality of community life (www.scdc.org.uk). Community Development as per Soubbotina (2000) is more towards improving the quality of individual's lives and improving their skills and abilities to develop and re-shape their own future development.

1.1 PROBLEM STATEMENT

The rural areas in Sri Lanka is clustered as villages under "GramaSevaka" (Village Officer) appointed by the government. According to Weeraratna (2016), approximately 30% of the households in Sri Lanka are below the poverty line, with majority of these belonging to the rural sector. The children living in these areas are suffering from lack of education, poverty, malnutrition, and are even led to drug and substance abuse at young ages. Children of farmers are prevented from attending school during the harvest season due to pressure from the parents to participate in harvesting process. Hence the school education is also very often neglected. Further, Sri Lanka as a nation does not have a proper cottage industry to ensure a home-based income generating mechanism.

In most of these villages, people live around the school, the temple and the village community. These three in Sri Lanka are well connected and integrated. Head priest in the temple and the school principal have a "say" in these villages to a great extent. Therefore, if one attempts to develop the livelihood of the community or the villages will not ensure sustainability due to the well-knit forces namely the temple and the school.

Having a steady source of income, and improved livelihood in the rural sector is a must. Hence this concept paper focuses on developing a conceptual framework for the rural sector for community development, and attempts tolay the foundation to enable a comprehensive study on the rural sector in Sri Lanka in time to come.

2. LITERATURE REVIEW

As per Blair, Deichert, and Drozd (2008), rural community development, focuses on the identification, implementation, and evaluation of efforts by the public to address their issues related to the social, economic, viability, and the sustainability of rural people.Rosiaro and Potts (2015) state that when it comes to the rural community, rural people can be farmers, entrepreneurs and innovators. Chen (2010) stated that rural community development landscapes are fast changing due to the integration of rural-urban development projects to enhance

the wellbeing of the rural masses.

2.1 HUMAN CAPITAL THEORY

The human capital theory (originally found by Adam Smith in (1776) as cited by Becker and Mincer (1962) states knowledge and experiences of small-scale business owners. Based on this original theory, (Bruederl, Prisendorfer and Ziegler, 1992), stated that human capital of an owner of a small firm acts as a resource to be used for his survival. Human Capital Theory (HCT), formalized by Becker and Mincer (1962) but concurrently developed by others, helps to understand the training activities of small firms.

This means that education and training for small firms indicate the investment in future productivity and not just as consumption of resources. In this perspective, both the firm and the workers depend on investments in human capital to enhance competitiveness, profits, and pay.

Rural Development as per(Agarwal, 1989)refers to a strategy designed to enhance the social economic, and cultural peripheries of rural community through collective efforts It is all about making change among rural people from the traditional and perineal way of living to improved standards of living by passing the benefits of development to poorest in rural areas. For instance, farmers, kiosk owners, landless and other economically and financially vulnerable sectors in the rural community (Acharya, 2008).

However,Noordeen and Salgado (2019) stated that community development which has three dimensions namely the School, Temple and the Community in Sri Lanka. They further came up with a framework where the community should have three objectives such as the livelihood, networking and the skills of the people in the community. Noordeen and Salgado (2019) emphasized that these three are essential as these are interrelated for the sustainability of the community.

2.2 COMMUNITY DEVELOPMENT AND SUSTAINABILITY

Bridger and Luloff (2013) stated that to advocate a sustainable development strategy is important based on sustainable community development. They (Bridget and Loaloff, 2013) further stated that sustainability is macro and sustainable community development is micro and local. In this aspect the economical sustainability is pivotal as it leads to social sustainability.

Sustainable community development stresses the importance of maintaining a balance between ecological concerns, community development and the societal development.Lal (2018) stated even having a cooperative banking system is ideal for economical sustainability for the rural sector.Krstic, Illic and Avramovic (2018) clearly stated sustainability has three dimensions namely the economic sustainability, ecological sustainability and the social sustainability. Rosairo (2016) based on a study carried out on the entrepreneurial skills of a Sri Lanka farmer, stated that farmers should realize to maintain high productivity and profitability for sustainability.Sandika and Hirimuthugoda (2011) argued that innovation and risk taking are important from the rural business perspective, due to the small asset base they possess, it is a nightmare for the smallscale businesses in the rural sector.

3. PROPOSED THEORETICAL FRAMEWORK

As stated above, the Sri Lankan community with the given cultural aspects, school, temple and the community are inter-woven. Noordeen and Salgado (2019) confirmed this.Hemachandra and Kodithuwakku (2006) based on the IFAD (2012) report, mentioned that market orientation amongresource-limited rural farmers in Sri Lanka was poor.

Rosairo (2016) stated that having the right links (networks) will assist the smallscale farmers and entrepreneurs to easily sell their products. He (Rosairo, 2016) also stated that linking and network building for resource-limited farmers to markets and networks provide new opportunities for them. Hence based on the above, the following proposition has been formulated.

P1: Higher the networking, higher the sustainability of the rural community

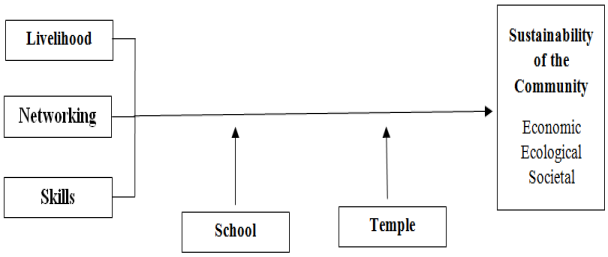
Chen (2010) argued, that whatever the macroeconomic issues, respective governments should have a pre-determined plan to protect the livelihood of the rural community not only for their survival but also for their sustainability. Rosairo and Potts (2015) also argued that cultivating entrepreneurial attitudes for rural formers will enhance higher livelihood on a study carried out on vegetable farmers in Sri Lanka. Based on the above, the following proposition is developed.

P2: Higher the livelihood, higher the sustainability of the community

Development of skills of the rural sector is important as skills will generate their income (Noordeen and Salgodo, 2019). Skill development on vocational training on agriculture, farming practices, production of handicrafts and artworks, pottery making, silk weaving, will ensure their living (Kapur, 2019). Tripathi and Singh (2017) stated that unemployment can be converted to employed workforce through skill development. Hence the following proposition is formulated based on such empirical studies.

P3: Higher the skills, greater the sustainability of the community

Based on the above arguments and rationalization, the following conceptual framework has been developed.



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3.1 METHODOLOGY

This concept paper is based on Theoretical Normative perspective. Edwards (1954) defined Normative theories as "sound" decisions as ones that are most likely to direct the decision maker with desired outcomes.Corner and Hahn (2012) rationalized the selection of Normative methodology as the study of informal argumentation where norms play a pivotal roleby distinguishing the two sets of normative theories. Proceduraltheories of argumentation seek to specify rules of engagement for argumentative practice,that is, the procedural rights and obligations of those taking part in rational debate(Van Emeren and Grootendorst 2004).The crucial role of norms in the field of argumentation is illustrative of their wider accept (Nickerson, 2007). Hence the purpose of this paper to develop the formal argumentative practice for the Community Development in Sri Lanka under Theoretical Normative perspective using the inductive approach.

The conceptual framework carries two moderators namely the school and the temple. Based on the framework, a judgmental assessment can be made. Noordeen and Salgado (2019) also stated the importance and the crucial role played by these two parties in the Sri Lankan rural sector.

4. THEORETICAL IMPLICATIONS

The research carried out in Sri Lanka on rural community development falls short of expectations. However, the rural population in Sri Lanka exceeds 65% (Statistics and Census, 2016). Hence testing the above framework would help as a basis for future research and to the academia.

Though literature confirms (Noordeen and Salgodo, 2019) that the school and the temple are pivotal in this community development process in Sri Lanka, through the qualitative data, a "Judgmental Assessment" can be made from this study which will help for future quantitative studies to include them as moderators and mediatorsfor future research. This would be a significant theoretical contribution this study intends to deliver.

5. MANAGERIAL IMPLICATIONS

This study will assist the policy makers to identify the key aspects to design future strategies even at national level to determine budget allocations and even to initiate rural based, community-based development projects. This would, upon implementation, lead toimprove living standards and also to ensure positive growth in the GDP.

6. LIMITATIONS AND FUTURE RESEARCH

One major limitation is the segmentation of the rural community. Hence it is suggested to segregate the communities into income levels and to conduct the study on separate areas in the country.

The purpose of this concept paper is to develop the framework to ascertain the community development activities and its sustainability. Hence based on the outcome of this study, future research can be further carried out on qualitative as well as qualitative basis.

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Impact of Covid-19 on Indian Banking System: An Analysis of Potential Threats

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ABSTRACT

COVID -19 is undoubtedly one of the biggest events for everyindividual. It has presented unprecedented challenges to many industries, government and individuals all over the universe. The pandemic leftover the health and humanitarian crisis along with the deep and far reaching impact on business and economy. Besides, financial service firms have the opportunity to help customers and businesses during this economic downturn and navigate the current storm. Indian banks have made various efforts to respond this pandemic period. They have focused on maintaining critical staff at branches and have temporarily redeployed staff to manage online or telephonic enquiries from their customers. They have also deployed various services like mobile ATMs and doorstep banking facilities for senior citizens and other customers that need additional attention. This article discusses the various challenges faced by the banking industries and the potential threats due to unexpected event of COVID-19 pandemic.

Keywords: COVID-19, Banking Sector, Indian Economy.

1. INTRODUCTION

The COVID-19 pandemic has a potential serious implication for the health of human being. It became an unprecedented challenge for our modern civil societies and health systems. The impact of this pandemic for out global economy and financial sector are unpredictable. According to economic experts the world is heading for a significant economic downturn. The responses from the Government and authorities have been prompt and various measure have been deployed to sustain the economy and the financial system.The Banking sector may not be affected directly due to this pandemic but as it is the forefront of the economic system, the impact on other sectors has indirectly affected the banking and finance sector. Banking system plays an important role in smooth functioning of the economy and fulfils financial requirements of corporate and individuals. Thus, stability of business and economy is important for the banking system. In this pandemic situation, a global slowdown would affect small and medium size companies more acutely as business loans given to these small and medium enterprises are at risk due to the forced shutdown in the country.The other territory sectors such as aviation industry, travel and tourism sector, hospitality industries are likely to be hit the hardest in this crucial situation. Airline service providers have already experienced a steep fall in the passenger traffic on their highest profit earning international routes. Due to forced lockdown in the country travel and tourism sector along with hospitality industry have missed out on the summer peak travel season, leading them to bankruptcies and consolidation across the sector.

2. IMPACT OF COVID-19 ON BANKING SECTOR

1. Rise in the level of NPAs: According to the Financial Stability Report of RBI, around 50 percent of the customers, accounting for half of the outstanding bank loans, opted to avail the benefit of the loan moratorium policy implemented as relief measures to tackle to impact of lockdown in the economy. The report also mentioned that if the macroeconomic environment worsens further, the NPA ratio in the banks may escalate to 14.7 percent under the very severally stressed scenario. According to the Investment Information and Credit Rating Agency of India Limited (ICRA) around 52 percent of the assets are under NBFCs which is under moratorium as of May 2020. However, out of these assets even if 10 percent will be converted in bad loans, it would directly double the gross NPAs under the NBFCs and will reach 9.6 percent of loans as of March 2021 which were supposed to be 4.6 percent as of March 2020. Further, any challenges faced by the NBFCs are likely to be faced by banks as well. Thus, if NBFCs default, it will be difficult for them to repay the bank loans. Still the bad loans have not piled up the banks due to moratorium facility availed by the Reserve Bank of India. Due to moratorium facility, the bad loans are categorised after 90 days i.e. 31st August 2020, now 1st December 2020 onwards. In Public Sector Banks, the loans booked under moratorium are around 40-50 percent and on the other side in large private banks it is about 20-30 percent only.

2. Recovery of Unsecured Loans: The aversion to unsecured credit, which initiated as the Covid-19 crisis disrupted jobs and incomes, continued. Meanwhile, reduced spending brought down credit card outstanding loans. Outstanding credit card loans fell 14.1% between March and May 2020 compared with an increase of 6.1% in the same period last year. Consumer durable loans fell 6.4% compared with a 3.4% decline in this period last year. Moreover, the Banks will have to face the challenges to recover the unsecured loans such as credit card

outstanding, personal loans, consumer durable loans etc.

3. Difficulty in Credit Risk Assessment: The RBI has implemented certain waivers policies in favour of borrowers such as moratorium to pay principal amount of loan and interest with relaxation on their classification as NPAs or restructured assets. These measures help borrowers to tide over temporary financial difficulties. However, banks have to identify and monitor the borrowers who are facing temporary and long-term financial difficulties so that provision can be made for such borrowers accordingly. During this pandemic situation it would be difficult for the bank to determine the extent and adequacy of collaterals available with them and subsequent provisioning. There may be additional disclosures required in the financial statements and computation of capital adequacy of the banks.

4. Issue of liquidity and capital adequacy: In situation of pandemic situation in the country the defaults may increase substantially as many firms would loss revenue for a long time. An increase in default likely to cause issues in liquidity and capital adequacy for the banks. However, the RBI has come up with certain measures such as reduction in Cash Reserve Ratio, reduction in daily maintenance of cash reserve, widening the policy rate corridor from 50 bps to 65 bps under the liquidity adjustment facility to ease short term volatility and bring stability to money market.

5. Adverse impact on specific loan covenant ratios being triggered: Under the current circumstances and its impact on capital markets and business across, banks and other NBFCs will face customers who are potentially experiencing financial crisis including deterioration of their credit ratings and financial position. In certain cases, there is a likeliness of borrowers to breach certain covenants linked to ratios like the current ratio, profitability ratios, return on equity (ROE), debt coverage ratios, etc.

6. Credit flow across the industries: According to Bloomberg incremental credit to all the industries in the economy fell 1.5 percent between during the period of March 2020 to May 2020 compared with a drop of 2.5 percent in the same period of the previous years. Besides, incremental credit to engineering firms fell 1.3 percent compared with a 2.1 percent drop in the same period last year. Credit to construction firms fell 3.7 percent against a fall of 2.1 percent in the same period last year. Disbursements to food processing companies fell 3.1 percent against a steeper fall of 3.4 percent during the last year. Incremental bank credit to infrastructure projects increased 0.1 percent between March and May this year compared to 1.3 percent decrease in the last year.

7. Deterioration in Assets Qualities: According to rating agency Moody the outlook of Indian banking system has changed from negative to stable as it expects deterioration in the assets of the banks, its quality due to disruption in the economic activity from the COVID-19 outbreak. According to the experts the quality of assets will deteriorate across the corporate, small and medium enterprises and retail segments that leading to pressure on profitability and capital of the banks.

3. CONCLUSION

During the crucial period of pandemic, banks have dispensed all critical services for the welfare and betterment of the society. The narrative will change in the upcoming period as banks will get questioned on their de-risking measures and resultant asset quality by their stakeholders i.e. regulators, investors, statutory auditors, media and board of directors. Banks have to be careful with a deterioration of global economic conditions and long shut-down imposed by the Government in an effort to slow the spread of COVID-19 will weigh on domestic demand and private investment. A sharp downturn in economic activity and an increase in unemployment will lead to a deterioration of household and corporate finance will results in increase in the delinquencies and hurt negatively to the banks. Government can make more capital infusions into Public Sector Banks to mitigate capital pleasure for them. The scenario over a longer period of time would depend on the extent of the outbreak, consequent impact on the economy, the expectations of turn around coupled with policy measures from regulators as undertaken by the government and investor sentiment. The banks have to operate in a financial system that is awash with liquidity and interest rates are extremely low. The government has to play a key role in the financial sector both as borrower and as a risk absorber by providing guarantees, back stops and increased direct fiscal support for borrowers whose businesses and revenues bear the brunt of the pandemic.

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Microfinance as a Tool of Financial Empowerment and Decision Making in Jammu and Kashmir

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ABSTRACT

Micro finance a tool for the better livelihood of women in rural areas was introduced in India during sixth plan. Very small loans under this scheme are provided to targeted poor women borrowers for starting their income generating ventures. In the state of Jammu and Kashmir the concept of microfinance was initiated through Swarnajayanti Gram SwarozgarYojana (SGSY) in 1999. Under this programme in Kashmir division during (1999- 2013), 6195 self-help groups were formed.Owing to this background, the present paper is a modest attempt to highlight the issues, challenges and achievementsof microfinance in the Jammu and Kashmir State. Various sophisticated statistical tools and techniques were employed for analysing the data. The results of the study reveals that encouraging as majority of beneficiaries in the study area (89.72 per cent) were self-employed followed by those who are engaged in family oriented business. While analyzing the type of family it was found that majority of the respondents were found living in nuclear families. Moreover, 72.22 per cent of the respondents' families were reported to be land owners. The study further reveals that Participation in SHGs had also improved the income, living standard, decision making power of women beneficiaries, etc. within the family.

Keywords: Empowerment, Decision Making, Beneficiaries, Assistance, Development, Betterment.

1. INTRODUCTION

Traditionally women's occupational status has always been closely associated with the home and family. She has only a secondary status because she used to be dependent on her father or husband. Throughout history womenfolk had been and are being the most ignored folks who suffered frequent discrimination because of their poor education, inferior status and unpaid productive responsibilities (McKee, 1989)**.** Women's freedom is restricted by men's control over their mobility, by socio-cultural expectations that they are mainly responsible for all domestic work, and in relation to this, by their uneven reproductive, productive, and community work burdens. Their limited access to, control over, and ownership of land, credit, and information, as compared to men, disadvantage them from meeting conditions of formal group membership and leadership (World Bank 2009, 63-70).

2. MICRO FINANCE SCHEMES FOR THE UPLIFTMENT OF WOMEN IN INDIA

Micro finance scheme was introduced in the sixth plan (1980-85) for the upliftment of rural women through increased access to formal banking services. Loans under this scheme are very small and are targeted to poor women borrowers to start income generating activities. The program is generally routed through small groups known as Self-help Groups (SHGs), which not only serve as a platform to supervise the activities of each other but also provides social collaterals. Some major initiatives to use SHGs as a tool to empower women include Support to Training and Employment Program for Women (STEP), Swawlambanprogramme, Swa-Shakti project, Swayamsiddha, SwarnaJayanti Gram SwarozgarYojana (SGSY), National Rural Livelihood Mission (NRLM) etc. Development of Women and Children in Rural Areas (DWCRA), Support to Training and Employment Programme for Women (STEP), Swa-Shakti, Swarna Jayanti Gram Swarozgar Yojana (SGSY), Swayamsiddha, SwadharGreh, National Rural Livelihood Mission (NRLM), etc.

3. POLICIES AND SCHEMES FOR WOMEN EMPOWERMENT IN JAMMU AND KASHMIR

J&K State Women's Commission, J&K Social Welfare Department, J&K State Women's Development Corporation, National Minorities Development & Finance Corporation, National Backward Classes Finance & Development Corporation, National Handicapped Finance & Development Corporation, Empowering Skilled Young Women Scheme, Swayamsidha Women Empowerment Programme, Indira Gandhi MatritvaSahyogYojna, Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), Training of Rural Youth for Self-Employment (TRYSEM), Swranjayanti Gram SwarozgarYojana (SGSY), National Rural Livelihood Mission (NRLM) are few of the schemes operationak in the region.

4. OBJECTIVES OF THE STUDY

The following objectives have been laid down for the present study.

- To examine the impact of microfinance onfinancial empowerment and decision making power of women in the sampled area.
- Comparative analysis of SHGs and benefits received by each member of the group at district level.

5. RESEARCH METHODOLOGY

The study has been carried out in Kashmir valley of J&K. The primary survey was carried out in three districts of Kashmir valley. To make the sample a representative one district Pulwama was selected from South, district Bandipora from North, and district Ganderbal from central Kashmir. For collecting primary data, it was decided to follow multi-stage sampling technique. In the first stage, 30 per cent sample was taken purposively from the study area i.e. 3 districts namely district Pulwama from South Kashmir, district Ganderbal from central Kashmir and district Bandipora from North Kashmir out of 10 districts ofKashmir valley. In the second stage, a sample of 9 community development blocks from the selected three districts was taken on the basis of purposive sampling i.e. those 3 community development blocks from district Pulwama, 3 community development blocks from district Ganderbal and 3 community development blocks from district Bandipora which had registered the largest number of self-help groups over the period of time. In the third stage a sample of 90 women SHGs were selected through random sampling technique from these selected 9 community development blocks i.e. 10 SHGs from each block. In the final stage, from each sample SHGs four members were selected randomly. In this way total number of 360 (9x10x4=360) women beneficiaries constituted our final sample for investigation.

Secondary data was collected from reports, books, newspapers, articles, journals, magazines, working papers, and NGO reports. In addition to this, data presented in the annual reports of banks, credit plans and district profiles were also used.

6. STATISTICAL TOOLS USED

Regression

Whena factor is dependent on more than one variable, correlation analysis will not reveal the relationship. For this purpose, the multiple regression technique was used to reveal the existence of linear relationship between dependent and independent variables. The multiple regression is applied for examining the factors influencing the income and savings of women beneficiaries of various microfinance schemes, the model is:

$$\mathbf{Y= \beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+U}$$

Where,
Y= dependent variable;
X_1, X_2, X_3, and X_4 = the independent variables;
β_1, β_2, β_3, and β_4 = regression co-efficient;
U = the error variable.

Prime Motive of the Members for Joining SHGs

To ascertain purpose of women for joining SHGs, four causes were mentioned viz. to support household expenditure, to promote income generating activities, to promote savings and to get loans. For carrying out this analysis, the Garrett Raking Technique (Garrett, 1969) was used. To analyze the reasons for joining the group by the members of SHGs, all the possible reasons were made known to the SHG members. They were asked to rank the reasons as per their priority and the outcome of such ranking has been converted into score value with the help of following formula:

$$\textbf{Per cent Position} = \textbf{[(Rij - 0.5)/Nj]} \times \textbf{100}$$
$$\textbf{J=1}$$

Where, Rij = Rank given for the i^{th}items by j^{th} individual, and Nj = Number of items ranked by j^{th}individual. The per cent position of each rank was then converted into Garrett scores by referring to the Table given by Garret in 1969.

Table 1: Reason for joining SHGs

Ranks	Reasons				Per centile Position	Garrett's Score
	To support household expenditure	To promote income generating activities	To promote savings	To get the loan		
I	188	104	31	37	12.5	73
II	108	169	36	47	37.5	56
III	31	45	141	143	62.5	44
IV	33	42	152	133	87.5	27

Source: Author's Calculation

From the table 1, it is clear that the most important reason for joining the SHGs was to support house hold expenditure, followed by promotion of income generating activities. To promote savings stood as the last reason for joining the SHGs. The findings are in line with those of PerwaysAlam and Mohammed Nizamuddin (2012)who reported that promotion of savings stood as the fourth reason for SHG members to join SHGs. Women in this part of the world are usually bound by family obligations which compelled them to join SHGs in order to contribute to household expenditure and income. During field survey a member of an SHG namely MumtazaIllahi remarked:

Income Generating Activities Undertaken by the Respondents

Economic activities undertaken by the respondents

supported by micro-loans have been categorized into eight groups as presented in table 3.

Table 2: Activities undertaken by the respondents

S. No.	Activities	Frequency	Percentage
1	Sozni	99	27.5
2	Crewel	76	21.11
3	Cutting and Tailoring	34	9.44
4	Weaving and Spinning	45	12.5
5	Vegetable cultivation	34	9.44
6	Cattle rearing	40	11.11
7	Petty Shop	21	5.83
8	Others	11	3.06
	Total	360	100

Source: Author's calculation

Table 2 demonstrates the type of income generating activities undertaken by the members of the SHGs in the study area. It is evident from the above table that the most popular type of income generating activities undertaken by the respondents was sozni and crewel. The other popular income generating activities include weaving and spinning, cattle rearing, cutting and tailoring, vegetable cultivation, and running small tuck shops. Most of the beneficiaries reported that they took up income generating activities which were available to them through their past work or experiences. However, no new innovation in terms of technology has taken place. Almost all the above mentioned activities are women friendly, where they can manage both home as well as their income generating activity without compromising with any of these. Microfinance schemes if implemented in letter and spirit, has a potential to act as an impetus to rural development and women empowerment. This is totally in line with Gandhian philosophy of "Gram Sawraj", development of small scale, village and cottage industries. Ideas of a self-sufficient rural economy, inclusive growth, self-respect, self-esteem, economic independence and empowerment in real sense can be materialized if these women are provided institutional, social, and moral support by external sources in the shape of loans from banks and grants from NGOs.

Decision making with respect to credit utilization

Empowerment is related to the capability and right to make decisions (Kabeer 2001). An empowered woman will be one who is self-confident and exercises control over decisions that affect her life. The Beijing Declaration (section 13), presents women's empowerment as a key strategy for development and stated that "Women's empowerment and their full participation on the basis of equalityin all spheres of society, including participation in the decision-makingprocess and access to power, are fundamental for the achievement ofequality, development and peace". Microfinance programmes are assumed to empower women through their increased decision-making ability in the household, business and community.Women's access to savings and credit gives them a greater economic role in decision making through their decisions about savings and credit. When women control decisions regarding credit and savings, they will optimize their own and the household's welfare (Mayoux, 2000).The personal empowerment of microcredit beneficiaries is hence defined as the ability of women to make decisions in various spheres (Maimunah Ismail 2001). Microfinance helps women to strengthen their economic activities and thereby increase their decision making ability at household and community level. Women's decision making ability with respect to loan utilization in the study area is illustrated in table 3.

Table 3: Decision making regarding loan utilization

Responses	Frequency	Percentage
Self	138	38.33
Both	150	41.67
Others	72	20.00
Total	360	100

Source: Field survey

In table 3, it is inferred that a significant proportion of the respondents 41.67 per cent take joint decision with others with regard to loan utilization and 38.33 per cent take their own decision for utilizing the loan amount. Though the decision making ability with respect to loan utilization have improved in majority of the cases, there is still a wide gap which is yet to be fulfilled. The ultimate objective of empowerment is not met if women are not allowed to exercise their power in decision making, as it has been found in the study area that 20 per cent respondents agree to the decision taken by others for utilizing the loan amount. In such cases the loan is taken on the name of women to just avail the benefits of microfinance scheme, while as the loan is utilized and invested in business enterprises by their husbands or other male members of family.

Table 4: Regression estimates: dependent variable-monthly average income per member

Variables	Coefficients	T	Sig.	R^2	F Value	Sig.
(Constant)	4.67024	10.77	0.000			
Amount of micro credit availed by the member	0.18666	4.06	0.000			
Monthly average micro savings per member	0.2020	6.40	0.000			
Age of SHGs in years	0.07963	3.19	0.002			
Microfinance training attended	0.12196	3.10	0.002	0.7457	207.63	0.000

Variables	Coefficients	T	Sig.	R^2	F Value	Sig.
Average education of members in the SHGs	0.02183	0.58	0.559			

Source: Computed data on the basis of field survey; Number of cases-360; Significant at 5 per cent level.

Table 4 we consider monthly average income per SHG member as dependent variable and amount of micro credit/loan availed by the SHG members, monthly average savings per member, age of self-help groups, microfinance training attended by the SHG members, and average education of SHG members as independent variables. The value of R-square for the model is 0.7457. This means that 74.5 per cent of the variation in the average monthly income per SHG member can be explained from the above mentioned five independent variables. In general, R square always increases as independent variables are added to a multiple regression model. The 'F' value assesses the statistical significance of the overall regression models. Larger the F ratio, the more variance in the dependent variable is explained by the independent variable. The regression model is statistically significant (F ratio=207.63, probability level 0.000). Coefficient analysis showed the relationship between dependent variable and independent variables. The parameters of independent variables are positive implying that the direction of change is positive, i.e. as the independent variables increase, the dependent variable also increases and vice versa. According to multiple regression the amount of micro credit availed by the SHG members has contributed to their monthly average income positively. Every time the micro loan provided to the member increase by 1-unit, monthly income per member will increase on an average by 0.187 units, when the other variables are held constant. Similarly, the change in monthly income per member is 20.2 per cent for each unit change in micro-savings per member; and 12.2 per cent for each unit change in micro-finance training. Information in table 13 reveals that micro-savings of SHG members is the most significant predictor of improvement in the monthly average income of the members, with a high beta coefficient 0.2020 (probability 0.000). Age of SHGs also contributes positively to the average monthly income of SHG members. The estimate of average education level of members in the SHGs shows positive contribution to the SHG members' monthly average income. On an average, one year of additional schooling results in an increase in monthly income per member by 0.0218 units, when the other variables are held constant. Correspondingly, the coefficients' p-value or significance value for micro credit, $p=0.000<0.05$; micro-savings, $p=0.000<0.05$; age of SHGs, $p=0.002<0.05$; and microfinance training, $p=0.002<0.05$ indicate that the results are statistically significant at the 95 per cent confidence level. On the contrary, average education of SHG members, $p=0.559>0.05$ was found to be statistically insignificant at the 95 per cent confidence level.

7. CONCLUSION

Under (SGSY) this programme in Kashmir division during 1999-2013, the total number of 6195 self-help groups were formed, out of which 4232 were women self-help groups. However, this scheme is now being closed and merged with NRLM (National Rural Livelihood Mission) which has also been rolled out in the state as Umeed (Hope). Umeed was launched in April 2013 in Jammu region and in Kashmir region the project was kick started in June 2013.So far as generation of self-employment is concerned, the results of present study are encouraging as majority of beneficiaries in the study area (89.72 per cent) were self-employed followed by those who are engaged in family oriented business. As far as the level of income is concerned, it has been found that the maximum respondents (47.78 per cent) were falling in the income range of Rs. 2001-4000 per month followed by 27.78 per cent of respondents in the income range of up to Rs. 2000 only per month. It is therefore, obvious that SHG scheme has better been directed towards relatively poor people in the study area.

It has been found that microfinance has a positive impact on women's empowerment in the study area. Participation in SHGs had also improved the decision making power of women beneficiaries within the family. Moreover, the respondents in the study area perceived improvement in most of the aspects of socio-economic empowerment The results obtained by applying regression analysis shows that amount of micro-credit received under SHGs, length of SHG membership, micro-savings, and trainings attended by SHG members exert positive influence on the socio-economic empowerment of women in the study area, as the value of Beta coefficients in case of above mentioned microfinance variables is positive and statistically significant.

8. SUGGESTIONS

In the light of above findings the following suggestions are put forth for effective functioning and implementation of microfinance program in Jammu and Kashmir.

- There is a need for government and other institutions to support creation of an appropriate environment for the future development of the micro financing in the state by establishing a full-fledged microfinance institution which must be established on the pattern of Grameen Bank of Bangladesh with sufficient branches in each district.
- For better functioning of the SHGs periodical training at regular intervals both by government and NGO's must be imparted to all group members to enhance their entrepreneurship skills. The current practice of one-day workshops will not be enough. We suggest provision of financial literacy and strategic transformative training, where microfinance beneficiaries are not only trained in dealing with calculation and business skills, but also enable them to prioritize areas of action and formulate plans to

achieve desired goals. These involvements in micro-level planning at grass root level will build their capacity and encourage them to take part in development processes.

- Marketing of the produce of microfinance beneficiaries was reported to be the main problem in the study area. Hence, strong marketing network is called for effective and proper marketing of products and services of micro enterprises linked to SHGs. Government and non-government departments should cooperate with the SHG beneficiaries in this regard. The goods produced by these units should be sold in different festivals, exhibitions, and trade fares, conducted by departments in different regions.

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Digital Transformation Processes in the Private and Public Sectors

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ABSTRACT

Cloud computing technology provides computing resources with higher scalabilityand reliability at a low cost.Organizations need a clear understanding of the risks and benefits of moving to the cloud computing technology over traditional computing solutions.The next generation of cloud services will transfer the services to the human being faster by automatic everything from request to installation, deployment and configuration— and all services will do up and down the stack and across the entire infrastructure.

Cloud computing allows customer to use of computer resources i.e. storage, networks, software or applications, or a virtual machine buy from third party cloud provider. In traditional IT approach of computer required organization to install and maintain their ownphysical infrastructure.In another approach, cloud computing is far more abstract as a virtual hosting environment accessible via physical component, all servers, application and networks are hosted in the cloud based on off premises approached. It is a real-time and shared virtual machine maintained between multiple different machines at the same time. So rather than you can rentthe computing power (memory, data storage space, networks and hardware) from cloud computing providers on a more cost effective pay-per-use basis.

The current cloud computing approaches to enabling real-time environment, dynamic infrastructure are incomplete, expensive and not scalability to support consumer mass-market requirements.

Cloud computing is the step by step development process of parallel, distributed and grid computing system consisting of a set of interconnected andvirtualized system that are connected automatically provisioned as one or moreundivided computing services based on service-level agreements established between consumersand the service provider. The use of internet and remote services it maintains the information, applications and networksand provides a more efficient computing power bycentralizing data storage, memory, processing and network etc.

It can also manage and control all computation resources byautomatically through the software and virtualization technique without intervene. There aremultiple layers in current cloud computingarchitecture, servicemodels, platforms, security issues i.e. privacy, scalability, reliability andstandard tool etc. This paper aim all about thecurrent technology and new technology of next generation cloud computing technology i.e. architecture, virtualization, security issues, challenges, applications, futureand scope of cloud computing.

Keywords: Cloud Computing, DistributedComputing, Virtualization, Server less, Docker Engine, Data Center.

1. INTRODUCTION

Cloud computing technology plays an important role of each human being. It is the only platform where all components can be connected to each other under one roof.

The main impact of the next generationcomputing service model for its main benefits in on demand self-service, universal,accessibility of network and geographical information based location independent resource pooling and transference system of risk.

Cloud computing makes a collection of already existing computing technologies i.e. Gridcomputing, parallel computing, distributed computing, cluster computing and virtualization.

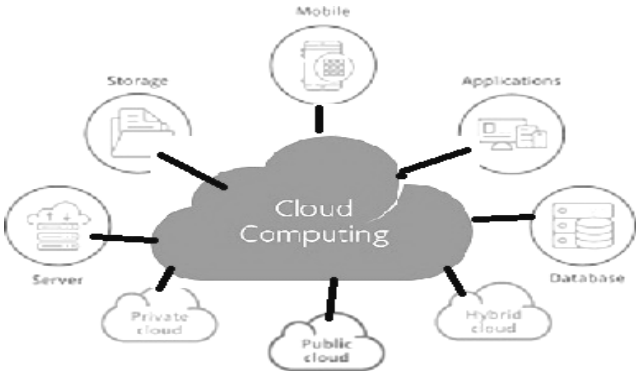
Cloud computing technology layerprovide a multi-level virtualization and abstraction through effective combination of computing system, data storage, software, and other computer resources, service developer can be very efficient to use of powerful computing power andstorage capacity of cloud computing technology only required to connect tothe network system.

There is no matter that cloud computing technology is the most popular field in IT industry. There are so many cloud service providers: Amazon Web Service (AWS), IBM Cloud Services, Microsoft Azure, Google Cloud Platform, Rack space and other IT cloud computing vendors have put their own cloud technology strategy, various internet service provider (ISP) are also have a great idea of attention on cloud computing technology, the very low cost of cloud computing platform becomes the focus of the concern industry.

2. WHAT IS CLOUD COMPUTING

Cloud computing technology is big pool of online services for on-demand delivery of serviceswith configurable computing resources (computer networks, server, and storage and software) that can be rapidly provisioned with minimum effort of user. Cloud service provider includes various types of services- computational power, memory, application, information, and storage services that do not need of client knowledge of the location and configuration of the system. The serviceprovider's transfer of common services online that are accessed from another web service through web browser, software and information are stored on servers. Several cloud infrastructures consists of

various services delivered through data centers.



3. FUTURE & SCOPE IN HANDS OF CLOUD COMPUTING

There is no matter that cloud computing is the most popular field in IT industry. Cloud is the new framework of a complete business computing model and delivery of services and application provides a scalable, reliable and cost-effective IT solution. In today's era, all is connected with the cloud through one or another platform. Many predictions are made by people regarding the online big datain cloud computing server because it is having capability of opening doors for newer platforms, applications, etc. Infinite number of possibilities paves the direction to create and implement innovative ideas. Thus it can be said that cloud computing is beneficial, convenient and economical for IT industry. For the next-generation technology role is going be as an integral element in the life of each human being. For the next path, one is going to find next-gen cloud computing technologies that will shape your mind with its future scope.

4. CLOUD COMPUTING TECHNOLOGIES IN NEXT-GENERATION CLOUD COMPUTING

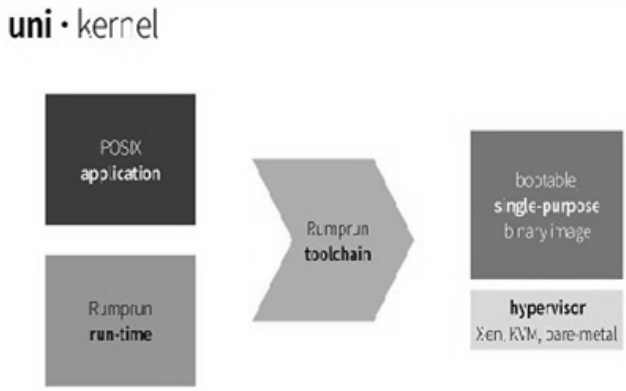
There are some technologies used in future cloud based platform:

Unikernels –Unikernels are future eco cloud system. It is a specialtype of technology based operating systems, it does not require any other Operating System which provides enhanced security, fine-grained optimization tool, and a smaller footmark required for micro-related services. They are a collection and made up of the library OS technology and can be customized on the basis of different software and hardware. These are in the form of executable machine image& image file, which can be natively executed on virtual machine monitor (VMM) i.e.known as a hypervisor.Unikernelsthat is nothing just a library files, which hold the all function and core capability of an operating system.

- Batch processing system:
- Single app runs on a single machine.
- Time sharing strategy:
- Multiple apps run on a single machine.
- Multi-user, process isolation & shareddependencies.
- Sandbox, virtualization & containerization technique.

(a) MirageOS: It is a library operating system, which develops unikernels for networking modelaim over a variety of online computing architecture and mobile environments.

(b) Rump run Unikernel: This operating system comprises of thousands of coding lines and works withPOSIX application directly on the hardware machine. RumprunUnikernels are based on driver component running POSIX applications on top of embedded systems and cloud hypervisors i.e. as Xen and KVM (Kernel virtual machine monitor). It also supports working on the cloud hypervisors like Xen and KVM.

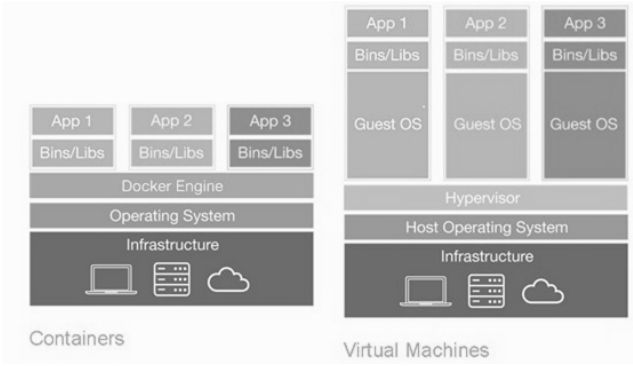


Block chain – Block chain technology is a new idea of internet where digital data is distributed without copying. Data held in the block chain appears like sharing, having numerous advantages of its use. Block chaintechnology can be explained as a database record that holds transactional property chain and while ensuring security, privacy, and transparency. In basic thing block chain is a chain or records stored in the forms of blocks, which are controlled by no single person. The data stored on the block chain is tamper-proof, it is very difficult to change or modify.Block chain is an incorruptible online ledger of economic transactions that can be programmed only through validation from every party involved.

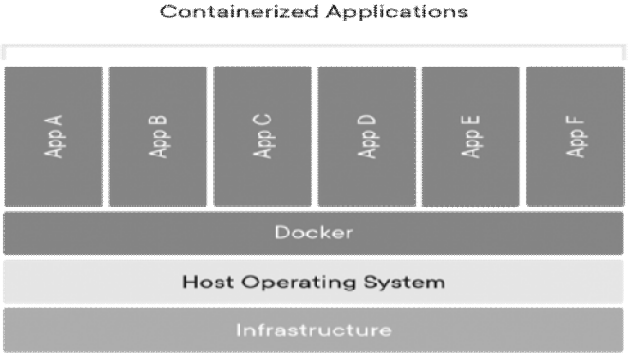
Each transaction on a block chain technology is highly secured channel with a digital signature that define its authenticity. Due to the use of encryption and digital signatures, Block chain technology allows all the network participants to reach an agreement, commonly known as consensus. This way, the chances of any fraudulent activity or duplication of transactions is eliminated without the need of a third-party.

Container-as-a-Service – Container-as-a-Service is a special type of technology provided by the cloud providers gives container orchestration and computing services.

Mainly use of CaaS technology solves the problem of applications developed in a certain PaaS environment and run is restricted to that PaaS environment's specifications environment, and eliminates dependencies. Container-type applications are migrate one platform to another platform very easily and can execute in any PaaS related environment. A container is a new framework of virtualization technology that does not require a virtual machine monitor tool (VMM) i.e. hypervisor. A container technology offers an isolated virtual environment at the operating system. Different containers run on a specific OS share the same OS kernel; run a container does not require launching another operating system.Containers technologies require less memory space than virtual machines can run more applications and require less number of virtual machines and OS.Many container services are currently available on public clouds, including Google Container Engine and Amazon EC2 Container Service (ECS).



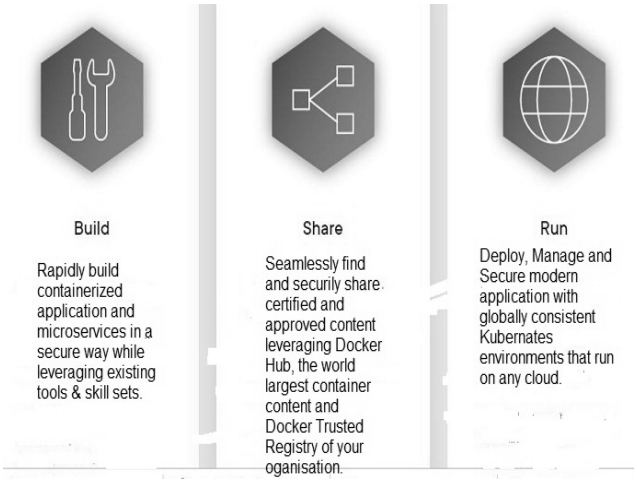
Container technology framework can be utilized by IT industry through web interface or API for easy container management. This technology is very helpful to software that is purposed to give relief from the stress between operational and developmental team in a business. Containers as a service is useful at the time of deploy application, pushing application data and monitoring of theprogram.Container-as-a-Services category simplify management and render a framework not only operation,objective of these tools is to deal with availability, scalability and networking. The examples of next-generation cloud technology are Microsoft Azure Container Service, Google Container Engine, Kubernates, Cloud Foundry's Diego, etc.



Multiple Container Service Platforms has been recently introduced. The applications of container technologies likeDocker and Rocket, Warden, and Windows; they are designed to package, and run applications. CaaS technology provides faster services means for fast application deployment and execution. These platforms consist of one or more orchestration software tools that provide an automated serviceto managing and execution of containerized application on cloud computing technologies-

Docker Engine: Docker Enterprise is the industry-leading, standards-based container platform for rapid development and progressive delivery of a consistent desktop-to-cloud platform to build, share and execution of modern application for kubernates engine in cloud, selection of software, tools and languages, execution of applications in any data center, on any operating system and any architecture, and make a central point of collaboration that easy and pipeline or streamlines processes across dev and ops.

Docker engine makes a securely build, share and run modern applications anywhere:



Serverless Computing Architecture: Server less computing technology is a new and compelling paradigm for the installation &deployment of cloud applications. Server less technology offers you to build and run latest applications and function without knowledge ofservers. Theserver less technology gives pay-as-you-go without additional work to start and stop server and is closer to original expectations for cloud computing.Developers using server less computing can get cost effective and scalability without knowledge of high level of cloud computing expertise that is time-consuming to acquire.

Although server lesstechnology including to various resources like computing power, storage, database , stream processing, message queuing, and many more available services, The main area belonging to server less technology is on computing services, also known as FaaS, is essentially a stateless computing container that is event-triggered and lasts benchmarks for a single invocation.In

this technology, server less computing, or function-as-a-service (FaaS), is canvassing as a good candidate for web development.

Definition of server less computing model as follows:

- "Server lesstechnology is an advanced platform that hides machine usage from users and run code on automatically scaled up, scale down and billing only for the time for the code is running".
- These definitions have two key features of server less computing technology:
- Cost effective policy—Pay only for what is running (pay-as-you-go basis) - This cost effective policy is very attractive to workloads that must execute i.e.server less essentially supports "scaling to zero basis" and avoid required to pay for idle servers machine. The big challenge for cloud providers is the required to schedule and optimize cloud resources.

Elasticity Model—scaling from zero to "infinity." Many users do not have control over servers that execute their code, nor do they know the number of servers their code runs on, so decisions power about scaling is left to cloud providers. User does not need to write & execute auto-scaling policies or define how low level &machine-level usage-CPU, memory, storage- translates to application. The cloud provider to automatically begin more parallel executions of programs when there is more demand for it.

Overview of Serverless Architecture: Server less architecture is a new concept of cloud computing, you do not need servers to execute the code. Server less architecture i.e. The code will be run on some third-party service provider server less framework instead of your created server.

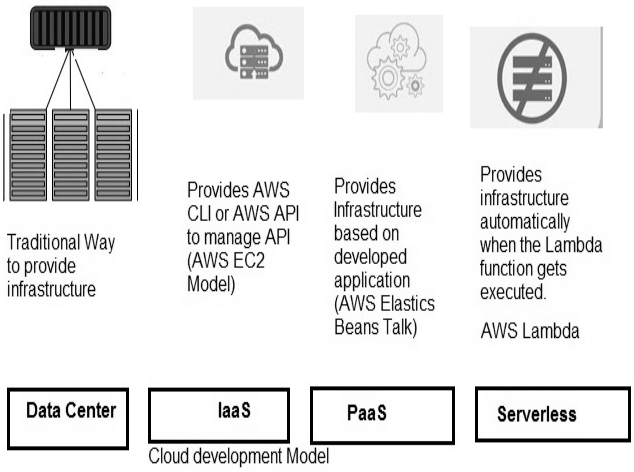
The serverless architecture performs in two ways:

- Backend-as-a-service (Baas)
- Function-as-a-service (FaaS)

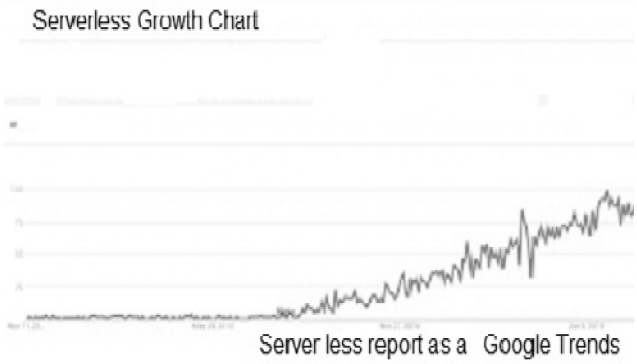
Backend-as-a-Service (BaaS): In BaaS service layer, asoftware developer can main focus on writing code or create a functionality of module, do not need to worry about provisioning and maintaining servers to execute the code. In this technique, the code will be run on third party server and the generic hosted application component can be bundled in applications.

Function-as-a-Service (FaaS): In FaaS layer, User can make their own backend logic and run using a server less framework of the third-party service provider. FaaScloud computing platforms are AWS-Lambda, Google Cloud Functions as well as Microsoft Azure Functions provide these technologies.

Here in FaaS, whenever any request comes to function as service model, the AWS provide function known as a Lambda creates a server for you to execute the code. So, Amazon web service-Lambda takes care to scale up &scale down the function when several concurrent requests come to function. So, this technique reduces the cost for organizations for future business leader.



Due to its simplicity and economical advantages, server less computing is gaining popularity as report generated by the increasing rate of order of the "server-less" search term by Google Trends. In future, Server less computing market size is estimated to grow to 7.72 billion by 2021. Several cloud providers including Amazon (AWS), Microsoft azure, Google Cloud Platform, IBM and others companies have already released server lesscomputing infrastructure with multiple efforts driven by both business and academic institutions.



Many IT leaders are search for a more cost-effective path to hire computing power and rather than managing cloud architecture, they now use to server less technology. Cloud is now being used just too readymade and other functions with server less computing.

5. CONCLUSION

In this paper, we have described the future requirements for implementing a truly dynamic cloud computing infrastructure for future technology/impact of cloud computing technology. TheCloud computing technology is having a bright scope in future; it is maintain several technical aspects and knows solution to deal with concern technology.The application area of cloud computing will continuously isincreasing &all small and big industries are using cloud computing to manage storage, traffic, hardware requirements. So, it isall about true thatthere is major impact of cloud computing on society and business.

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Significance of Financial Inclusion As Linked To Financial Integral Strategy : With Special Reference to Microfinance

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ABSTRACT

Financial inclusion – conceptualized to play a significant role in the Indian financial system as also integrally linked to financial integral strategy – has come a long way in imparting access to financial services at an affordable cost e.g. Bank accounts, savings product, Remittances and Payment services, Insurance Advisory services Entrepreneurial Credit, Micro Credit and, most importantly, Microfinance to the unprivileged and less fortunate segments of the society both in urban and rural areas. In this context Microfinance which witnessed unprecedential growth has firmly established itself as one of the essential potential contributors or a major tool in quantumly pushing the government's growth agenda of Financial Inclusion. To attain the formal target of financial stability through focus on financial inclusion, the requisiteness of financial literacy, transparency in governance and inclusively facilitating efficient allocation of productive resources can be catered to. It can undoubtedly be ascertained that financial inclusion is an incorporation of social inclusion too coupled with the fact of participatory approach on the part of all stakeholders concerned. Nevertheless, it is the accountability of both public sector as well as private sector to work in tandem so as to strengthenly leverage the boosting capacities and drives for financial inclusion – Keeping in mind the persistent fact that financial inclusion as linked positively to microfinance is a vital component of an inclusive growth oriented economy which envisages overall socio-economic development, that too in a developing economy like India where its implementation in the face of technological advance counts immensely. In a parlance financial inclusion/enhances the country's banking system as also financial system – with a prominent role of RBI in this regard – comprehensively by not merely easy non-discriminating access to its services but also by strengthening the availability of economic resources to.

Keywords: Financial Inclusion, Stability, Microfinance, Financial Services, Resources.

1. INTRODUCTION

The FIS (Financial Integral Strategy) becomes highly indispensable in the current competitive global scenario – with the targetted mission and vision of financial inclusion, which, most acknowledgingly is the exigent call of a nations' society and economy towards providing a stimulus to not only financial stability but also towards an integrated developmental approach.

2. OBJECTIVES OF STUDY

- To constantly aim at bringing financial sustainability in the nations' economy.
- To intend to provide affordable/economical financial assistance in lien of sufficient competition where options can be chosen from.
- To aim at establishing proper financial institutions with transparent standards and defined categorical regulations.
- To apprise the less privileged classes about the benefits and outcomes of financial services cum microfinance at grassroots level.
- To significantly aim at imparting financial literacy as well as financial awareness to the less fortunate people – so as to help them avail financial services.
- To aim at offering digital payment systems or mobile banking so as to make these easily accessible in remote areas, also with the help of Fintech (Financial Technology)
- To target essentially at imparting custom-made and tailor-made financial solutions to the poor masses – corresponding to their income levels, household needs, financial conditions and preferences.
- To ensure participatory role of all stakeholders towards financial stability including non-governmental organisations and SHGs.

3. METHODOLOGY

Secondary Data has been used in this paper, such data/study material has been published by various institutions – utilized for analysis of this paper – such as RBI, University Library, Reports of World Bank, Government of India, National Bank for Agriculture and Rural Development (NABARD), Internet access and State Level Bankers Committee and Khan Committee Report.

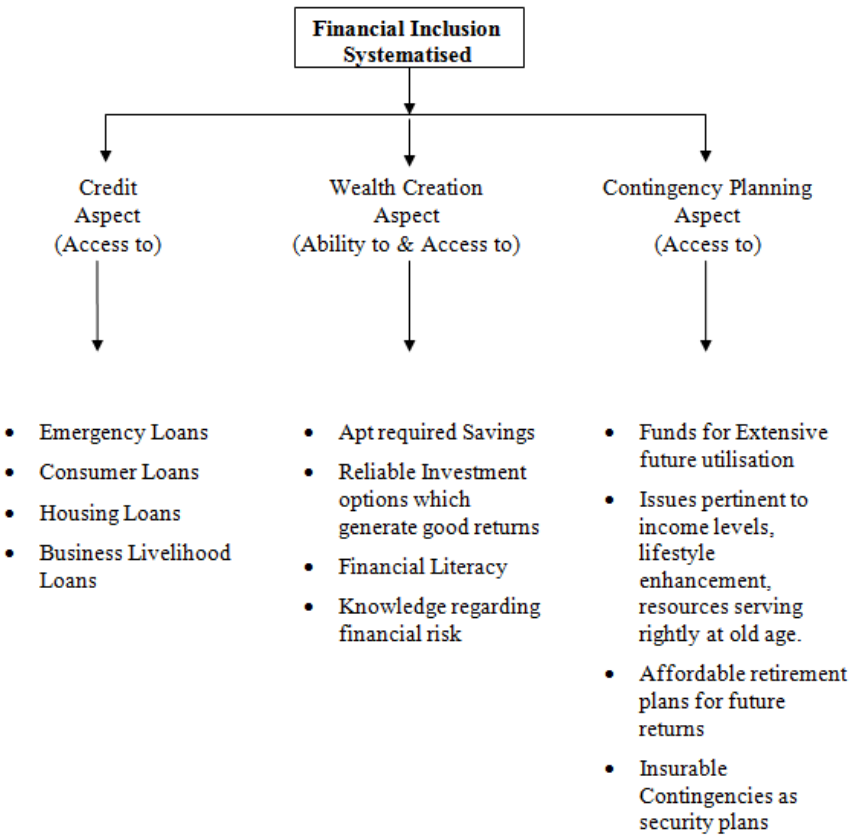
4. FINANCIAL INCLUSION – FINANCIAL INTEGRAL STRATEGY LINKAGE

Finance inclusion considered as a highly significant Government agenda integrally encompasses the potential contribution of Microfinance – especially in Indian Context – which has in the recent years experienced an unprecedented growth, thereby establishing itself firmly as a key strategy promoter towards inclusive growth, self-empowerment goals, reduction of poverty and provision of broad range of financial services at an affordable cost viz. small loans, savings, deposits, payments services, money transfers, insurance cover to poor as well as to micro enterprises of underprivileged and low income households. Nevertheless, the role of SHGs, too, assumes immense

importance in making micro enterprises sustainable for entrepreneurial development cum socio-economic sustainability.

The highlight of financial inclusion - microfinance has its manifestations in exigency of 'FIS' (Financial Integral Strategy) – an ascending step towards sustainability of the financial sector. Furthermore, referring to FIS, it plays an important role in controlling and strengthening the economy's financial market in case of fluctuations evident time and again, that too, in the current globally integrated scenario. The structural profile of FIS encompasses the three domains of (i) Financial Literacy or Education; (ii) Financial Stability; and (iii) Financial Inclusion. This Paper mainly deals with Financial Inclusion as linked to microfinancing; but the three tripods of financial integral strategy are linked to each other in building an area of equity, welfare, prudence, discipline and judiciousness in the financial sector. Explanably it can be stated likewise in economic market terminology in terms of Demand and Supply which lay the foundation for financial stability. For e.g. Financial literacy or education pertains to the angle of Demand – by improving and increasing financial knowledge regarding services and campaigns as also awareness among less fortunate people. On the other side of the coin, financial inclusion endeavours to handle the angle of supply – by ensuring toughly that all economic classes most non-discriminatingly avail financial services provided to them as end users. It is this 'Demand-Supply' syndrome which adequately is anticipated to result in Financial Stability.

The targeted purpose of Financial Institutions is overcoming barriers in way of prudence, judiciousness, equity, accessibility towards financial services to the less fortunate sections of society, awareness generation, financial management and transparency not only in transactions but also in implementational mechanisms. For all this, RBI is promoting "Finlit" (financial literacy) to low income groups of society and households both on urban and especially rural basis – by establishment of FLCs (Financial Literacy Centres) as also FACs (Financial Awareness Camps) on monthly basis or frequently as and when required.



With the economy of India being kept in mind, the Khan Committee (2005) is credited to inceptionally release and discuss the Report relating to rural credit and microfinance. In the same year, RBI too released its Annual Policy Statement thereby familiarising the concept and futuristic benefits of Financial Inclusion even in every remote nook and corner of the nation. Such an addressed issue was considered highly indispensable in form of campaigns. so that monetary requirements of poor people and access to non frilly and non complicated financial services can be catered to.

As a significant measure, govt. placed special emphasis on provision of social security cover to the less fortunate segments both economically and socially. For this purpose, formulation of policies as also their adequate and

timely implementation gained momentum as a mission pursuance, viz. PMJDY (PradhanMantri Jan DhanYojna); APY (Atal Pension Yojana); Stand Up India Scheme; PMMY (PradhanMantri Mudra Yojana); PMSBY (Pradhan Mantri Suraksha Bima Yojana); SSY (Sukanya Samriddhi Yojana); JSBY (Jeevan Suraksha Bandhan Yojana); CEGS (Credit Enhancement Guarantee Scheme) for SCs mainly. Initiatives regarding VCF (Venture Capital Fund) mainly for backward classes; VPBY (Varishtha Pension BimaYojana), etc. Hence, it can be truly stated that timely access to financial resources as well as services is an overpowering aspect when correlating financial inclusion with microfinance. In this pretext, three broad classifications need to be catered to viz. Credit, Wealth Creation and Contingency Planning – illustrated in the chart.

5. INTEGRAL ROLE OF MICROFINANCE TOWARDS VISION AND MISSION OF FINANCIAL INCLUSION

While discussing the integral role of microfinance towards accomplishing both vision and mission of Financial Inclusion as committedly set by the Government, participation on the part of all stakeholders requisitely sets the right timing for an economy's boost.

Such can be explained in the case of banking services network, mainly in rural areas, where less privileged segments – both socially and economically – are generally unaware or less aware about the procedural formalities regarding submission of mandatory documents e.g. income identities for verification, process of loan application or creation of a bank account, access of information pertaining to fulfillment of minimum eligibility criteria, minimum credit score, lack of financial literacy as well as resources and lack of financial discipline. Even when services linked to microfinance are precedingly and prioritisingly considered, sustaining and imparting employment standards coupled with entrepreneurial abilities in the present competitive scenario still remains questionable. Requisiteness demands access to such financial services which lend true and creditable meaning to the concept of financial inclusion – a stimulant to an economy characterisedly inclusive growth and financial sustainability.

Most non discriminatingly and on equity basis, financial assistance systems need to commit themselves on route to ensuring transparency and efficient cum effective mechanism of microfinancing. Then only the principles of distribution, stablisation, judicious financial management and sustainable policy formulations as well as implementation can affordably be linked at micro level of accessibility to the concept of financial inclusion in the real sense of the term. However, two significant aspects need to be considered in this context- involvement or a participatory approach on the part of the society in totality and awareness generation towards mission cum policies regarding functioning of financial services in the country – especially developing economies like India.

The most effective mode by which socially and economically under privileged sections can be included and strengthened in the mainstream of development is Microfinance. Such a demanding mode is known for its cost effectiveness – extensively impacting the lives of less privileged as well as impoverished sections; and considered a gateway to provision of services cum facilities towards financial inclusion. Undubiously, with Microfinance being the focal point in imparting opportunities for employment and lifestyle enhancement, it comes as a boon toward increasing accessibility of financial services to the poor as also inculcating a confidence cum meticulous financial management. However, an underlying vision is to reduce dependence on unorganised and informal credit systems, rather, treading towards formal and systematic credit avenues as an integrated measure for financial inclusion and microfinance.

6. CONCLUSION

Concludingly, Microfinance as conceptualised lends true meaning to its enforcement as it is considered the most effective mode of providing access to funds/credit/loans not only to small scale enterprises but also to the wider as well as less privileged sections of the society – thereby impacting their lives in a cost-effective way. With this perspective, the strategic mission of financial inclusion definitely relates to enhancement of financial system; resource availabilities are also strengthened; and offers a stimulus to savings among the poor both in urban and rural areas. It is then that endeavours in the direction of socio-economic progress and financial sustainability can be catered to in a nations drive to economic growth.

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Financial Inclusion: A Journey towards Inclusive Finance in Indian Scenario

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ABSTRACT

In a developing country like India, where the majority of the population works in the unorganized sector, financial inclusion is extremely important. A vast section of the population still does not have access to banks and do not know how to save money or gain access to credit. It is important to bring the Indian population under the realm of financial inclusion and everyone should have access to basic financial services. This paper discusses the main idea of financial inclusion and the extent of financial inclusion in India in the present context by collecting relevant facts relating to the access to savings, credit, remittances, and insurance by people in the formal financial structure. This paper also tells about the contribution of SFBs, NBFC-MFIs in financial inclusion based on secondary data. The paper gives a brief introduction of financial inclusion and follows it with a brief literature review. Based on the past work done in this area, the key findings on the present scenario of financial inclusion in India are presented. Some issues and recommendations are suggested at the end of the paper.

Keywords: Financial Inclusion, Financial Services, Inclusive Finance, SFBs, NBFC-MFIs.

1. INTRODUCTION

Financial inclusion has always been an important priority for the government of India as access to appropriate financial services enables the people to manage their incomes and also it helps to bring down income inequality. It helps in the reduction of poverty. There is ample evidence to support the same from the past and different countries. Financial Inclusion refers to the access to suitable financial services by all sections of the society at an affordable cost. It emphasizes access to the formal financial services by the poor section of the society at an affordable cost. Rangarajan (2008) defined financial inclusion in the report of the committee of financial inclusion in India as "process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost". Financial services include a wide range of products including savings, credit, insurance, remittances, and payment.

A majority of the population in India lives in the villages and remote areas where there is no proper infrastructure for these people to include in the mainstream banking facilities. Even if there are banking facilities, people are not willing to enter into a cumbersome procedure. Also, there is a lack of literacy in rural areas which exaggerates the financial illiteracy. From the very beginning itself, the RBI and Government of India are making continual efforts towards the fulfillment of this goal of including a vast mass of the population into the mainstream banking network. The branch expansion, priority sector lending, subsidized credit, Lead Bank scheme in 1970, Kishan Credit Card scheme in 2001, opening of RRBs in 1975, NABARD and Self Help Group linkage in 1992, use of microfinance institutions as business correspondents, etc. are notable steps and measures taken by the Government and the RBI. Despite all these measures, a majority of masses were still unbanked. With the introduction of Prime Minister Jan DhanYojana (PMJDY), the landscape has changed considerably as the report of Global Findex states that around 80% of the Indian population has a bank account in 2017 after the introduction of PMJDY. The report also points out that 190 million Indian adults are still unbanked. With the introduction of Small Finance Banks (SFBs) and Payment Banks it is expected to further bring down the level of exclusion considerably. The growth of a nation cannot be possible by excluding a major portion of the population. Financial inclusion is necessary for inclusive growth, which aims at equal distribution of growth benefits as well as creating economic opportunities with equal access for all.

2. LITERATURE REVIEW

According to Chellaswamy&Jayakumar (2020), secondary data and multiple regression have been used to show the relationship between financial inclusion and banking in India. This study establishes that banks have a major role to play in bringing more people in the realm of financial inclusion. Through savings accounts, remittances and easy credit, banks can serve a large number of people simultaneously and solve the issue of financial exclusion.

Sinha and Piedra (2020) are of the opinion that the financial inclusions policies taken by the Indian government are flawed because short-term fixes are preferred over long-term benefits. Many of these policies do not pose any potential solution to the long-term issue of financial exclusion. On the contrary, most of these policies are sham and temporary measures to solve the problem, without considering the long term implications.

Singh and Pushkar (2019) think that the main emphasis for the development of the Indian society is inclusive as well as sustainable development of the country's population. The Government of India has been working towards digital financial inclusion to help individuals, households, and businesses to save money, make easy remittances and obtain valid credit. Technological advancements can help in the growth of financial inclusion in India and reach every nook and corner of the country.

Barot(2017) thinks that a strong financial system can help underdeveloped countries reach a stable rate of growth. This paper gives a detailed description of the past and present measures being taken to help the Indian population attain financial inclusion. Through opportunities like Electronic Benefit Transfer, KYC norms and UID, more people can gain access to financial inclusion. However, there are challenges like financial illiteracy, lack of formal knowledge and difficult geographical locations that hinder financial development for all.

According to Purohit&Mishra(2017), the rate of financial growth has been very low between 2010 and 2015. The lack of sufficient bank branches, the inability of people to maintain minimum bank requirements, and lack of proper documentation are reasons for the limited growth of financial inclusion in India. Payment banks can help in reaching a large number of people and helping them gain access to savings account and loans at affordable interest rates.

3. SIGNIFICANCE OF THE STUDY

Previous literature has provided evidence that financial inclusion is an important policy measure and is important for the growth of the economy as well as for inclusive growth. It helps to eliminate the poverty and better management of user's financial resources. There are empirical and inductive studies related to financial inclusion. There are lots of changes in the financial system in the country recently. As a result, new financial institutions have emerged in the country. This study made an attempt to know the financial inclusion in India in the present context including the contribution of all such financial institutions.

4. OBJECTIVES

The objectives of the study are as follows:

- To understand the meaning and importance of financial inclusion.
- To understand the present scenario of financial inclusion in India
- To suggest measures and recommendations to further expedite financial inclusion.

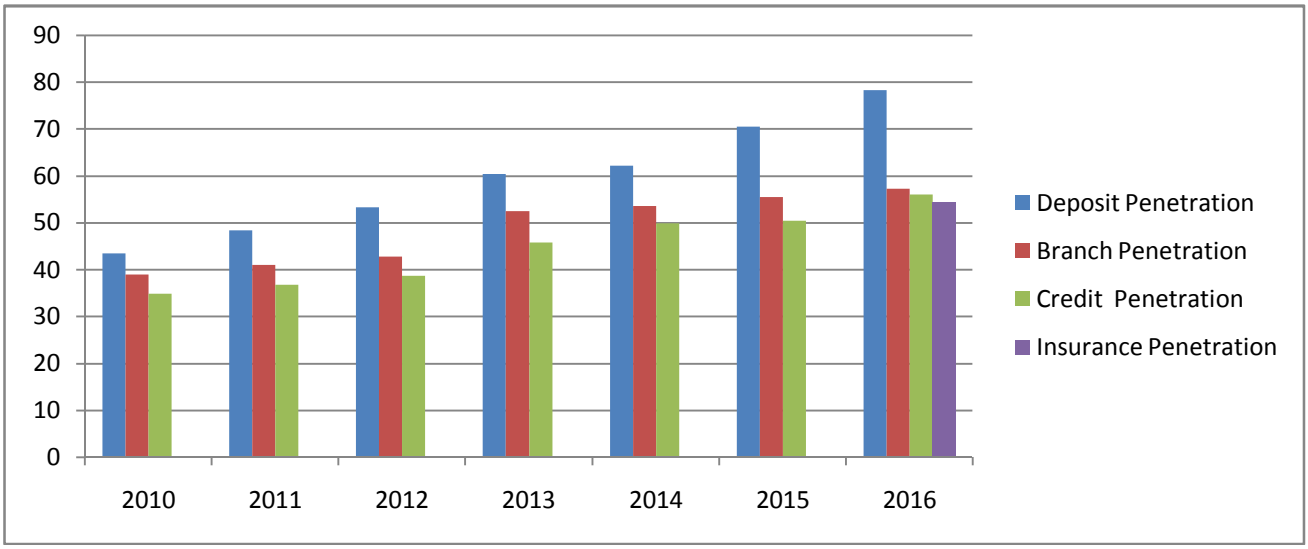
5. DATA COLLECTION AND METHODOLOGY

The paper has utilized secondary data from various sources like journals, articles, newspapers, reports of RBI, CGAP, MFIN Micrometer, CRISIL Inclusix index, MicroSave, World Bank, etc. The paper is descriptive. The charts, tables, and graphs, etc. have been used for analysis and display of findings.

6. ANALYSIS AND DISCUSSION

The World Bank on April 19, 2018, released the Global Findex Report 2017. This report shows that 55 percent of new bank accounts opened globally are from India only. India witnessed a great jump in the account ownership during 2014-2017 as 80 percent of Indians owned a bank account in 2017; there were only 35 percent bank account holders in 2011.

Fig.1: Financial Inclusion scores of India from 2010 to 2016



Source: CRISIL(2018), CRISIL Inclusix: An index to measure Indian progress on Financial Inclusion, volume 8

This increase in bank account ownership in India has attributed it to the PradhanMantri Jan DhanYojana, a government policy that aimed to increase financial inclusion through biometric identification. As per the data

of the Indian Government, 31.45 crore accounts have been opened under the Jan DhanYojana with the aggregate deposit balance of Rs 80545.70 crore, as on April 11, 2018. The total number of current and savings accounts in banks rose to 157.1 crores in March 2017. Despite having relatively high account ownership, India claims a large share of the global unbanked population. Over 190 million Indian adults still do not have a bank account. Out of the total unbanked population of India and China, 60 percent of the unbanked adults are women. In India, around 4 in 10 unbanked adults are in the age group of 15 to 24 years.

The key findings of the above report state all northeastern states except the Tripura feature in the bottom scoring states while Kerela, Goa, Andra Pradesh feature among the top-scoring states in terms of financial inclusion. The all-India CRISIL Inclusix score for India improved to 58.01 at the end of fiscal 2016 (Fig. 1) from 50.12 at the end of fiscal 2013. And for the first time, insurance was added as a new dimension. Figure-1 depicts the financial inclusion measured by CRISIL Inclusix is based on branch penetration, deposit penetration, credit penetration, and insurance penetration. As per the financial inclusion plans (RBI, 2018-2019), the progress and performance of banks are quite satisfactory. The number of banking outlets in villages increased from 67,694 in March 2010 to 5,97,155 in March 2019 after the permission granted by RBI for the appointment of BCs and design a framework through which banking facilities can be expanded in rural areas by utilizing both bank branches and BC outlets. In addition, the number of urban locations covered through BCs has also surged from 447 in March 2010 to 4,47,170 in March 2019. The Basic Savings Bank Deposit Accounts (BSBDAs) have gone up from 73 million in March 2010 to 574 million as on March 31, 2019. The flagship programme of PMJDY solely contributes to the opening of bank accounts of around 30.26 crores as on September 30, 2017, with an approximate balance of Rs. 666.06 bn. The total number of transactions in BC-ICT accounts which were around 27 million during 2010-11 has increased to 2084 million as on March 31, 2019.

As per the report of MFIN Micrometer, as of 30 June 2018, Banks are the largest provider of microcredit with a loan outstanding of Rs 58026 Cr, accounting for 39% of total micro-credit lending. This includes both direct and indirect lending by utilizing the services of Business Correspondent partnerships. NBFC-MFIs stand as second in terms of providing micro-credit with a loan amount outstanding of Rs 47650 Cr (excluding BC portfolio channeled through NBFC- MFIs), accounting for 32% total of loan amount outstanding. SFBs have a total loan amount outstanding of INR 31,020 Cr with a total share of 21%. NBFCs account for another 7% and Non-profit MFIs account for 1% of the universe. Compared with Q1 fy17-18, Banks portfolio has grown by 51%, NBFC-MFIs (excluding) by 50% and NBFCs by 74%. There is growth in the portfolio of SFBs by 8% and Non-profit MFIs by 13 %. As of Q1 FY 18-19, SFBs have 1.76 Cr loan accounts with a total loan amount outstanding of INR 31,030 Cr under micro-credit. The average loan outstanding per account for the group of SFBs is Rs 17,631 which is a 7% increase over Q1 FY 17-18. Compared with Q1 FY 17-18, the loan amount outstanding has increased by 8%.

7. ISSUES AND RECOMMENDATIONS

There are certain concerns regarding the obligations that financial institutions face while serving the financially excluded sections of society. An increase in NPAs for banks is a strong possibility because in many cases, small-time business owners default on loans. Banks can find it difficult to recover the money when it gives credit facilities without proper verification. A high maintenance cost for accounts is also a problem for banks when people are unable to maintain a minimum balance in their accounts. Banks have to bear the costs associated with such accounts, without earning any revenues in return.

Based on the data that has been collected for this study, financial inclusion is imperative in the context of the Indian economy. To bring about greater inclusion, several measures can be taken like (a) Appointment of more Banking Correspondents/Banking Agents to open savings accounts in villages can be a good way to bring more people under the umbrella of financial inclusion. In many rural and unbanked areas, people do not gain access to basic financial services. BCs can travel to such places and help people open accounts, on behalf of banks. (b) Imparting credit facilities to SHG and Liability groups is also an excellent way of promoting financial inclusion. Such credit expansion can help in promoting new sources of employment as well as encourage people to take up new vocations and causes. (c) Training people in financial knowledge will also help in promoting the idea of inclusion. If people are made to understand the significance of saving money or gaining access to the right sources of credit, they are less likely to suffer from liquidity crunches or fraudulent sources of credit.

8. CONCLUSION

Financial inclusion is extremely important for Indian policymakers and can bring about overall development in the country. To bring about a holistic improvement in societal and economic situations in the country, participation and contribution of every section of the society is necessary. Banks and other formal financial institutions, especially the new small finance banks and payments banks that are specially designed for banking the unbanked, can play a vital role in serving the vast section of the Indian population and help them live with dignity and respect through inclusive finance. It further helps them achieve societal status. In a country like India, where economic disparity is high, financial inclusion can lead to an integrated growth for people from different strata of society. There is a need to increase financial literacy and develop appropriate financial services to ameliorate financial inclusion further.

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Inclusive Financial Ecosystem: An Agenda for Sustainable Economic Development

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ABSTRACT

One important key aspects of any economy is its vibrant financial system which fuel the engine of economic growth. In recent decades India had relatively strong records in terms of economic growth and capital market performance but in terms of holistic development this aspect has another perspective also. When we look at the picture in totality, there has been a parallel rise in income inequality and a growth in urban-rural divide. . Global trends have shown that in order to achieve inclusive sustainable development and growth, the expansion of financial services to all sections of society is of utmost importance. Population of a country is the most important component of its economic and financial system. At an estimate in April 2018 around 190 million adults in India don't have bank account and almost half of the bank accounts remained inactive in the FY 17-18.

India's competitiveness remains undermined due to weakness of many fundamental aspects deriving sustainable growth in the country. In order to achieve inclusive growth and development it is essential to ensure that benefit and opportunities created by growth is shared by all. One way to ensure this is by providing financial services at affordable price to underprivileged population. This paper is a descriptive endeavor to address the significance and relevance of financial inclusion for sustainable development of the nation and in uplifting our economy from vicious circle of poverty. Paper also gives an account of microfinanceinstitute's role and achievement in realize the objective of inclusive growth. An attempt has been also made to discuss the dynamics of financial inclusions in terms of product and services involved.

Keywords: Financial Inclusion, Sustainable Growth, Microfinance.

1. INTRODUCTION

According to RBI "Financial inclusion (FI) is the process of ensuring access to appropriate financial products and services needed by weaker section and low income group at an affordable cost in a fair and transparent manner by main stream institutional players".

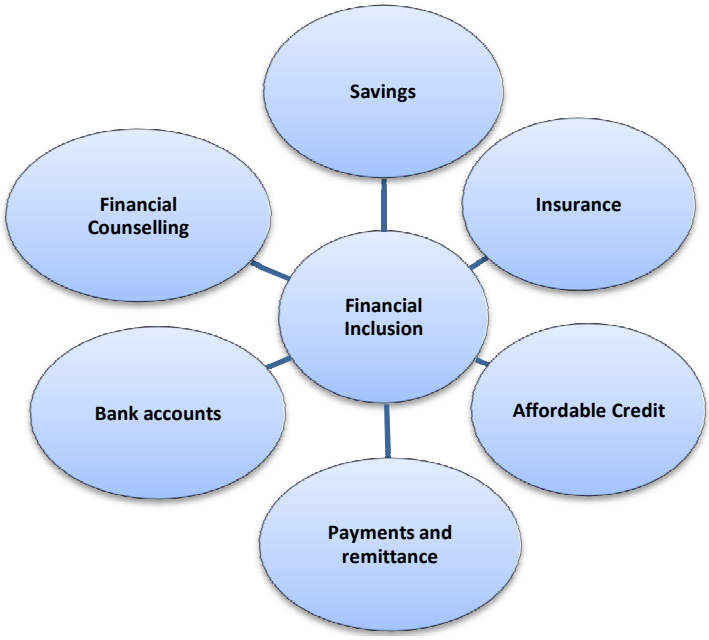

Chart 1.1

The main objective of financial inclusion is to improve the range, quality and availability of financial services to the unserved and financially excluded section of the people.Exclusion growth has hindered economic growth at the bottom of the pyramid and looking at the size of the rural population the need to aggressive financial inclusion

drive cannot be underestimated. In order to achieve the sustainable economic development it is imperative to uplift this section which has the potential to directly contribute the GDP numbers by increasing productive activities and indirectly by serving as a massive consumption market for indigenous produce.

A bank account is not everything about financial inclusion, Financial Inclusion, broadly defined, refers to universal access to a wide range of financial services at a reasonable cost. These include not only banking products but also other financial services such as insurance and equity products (The Committee on Financial Sector Reforms, Chairman: Dr.Raghuram G. Rajan). The basic components of FI are depicted in chart 1.1.

Saving to GDP ratio in the country is remarkable which is around 29.8% as compare to 29% in Russia, 47% in China and 16.5% in Brazil and 19.6% in South Africa (2017, World bank data). Despite good number of absolute value of savings, it is highly concentrated. The rural –urban structure of the nation doesn't support the broader inclusion of the population as a part of financial ecosystem. The needs of many of its rural population remain unmet in terms of access to basic services. Financial and Social exclusion has left majority of rural population behind and resulted in untapped human and economic potential.

According to 2011census, 83 croreslive in rural area. The hinterland in India consists of about 650000 villages inhabited by around 70% population of the country. Per capita GDP in rural region has grown at a CAGR of 6.2% since 2000. Considering the size and demographic structure of the country there are certain key principles for effective implication of financial inclusion a follows:

- Easy accessibility and availability of micro financial products and services
- Affordability& low cost of services for wider adoption
- Appropriateness of the plans that addressing thespecific needs of the beneficiary.
- Usage of the services and products should be for productively utilized. Access to these resources should be accompanied by inculcating the habit of banking
- Financial literacy and awareness for mass acceptance of schemes and participation
- Innovation and Diversification coupled with simplified formalities and distribution channel

2. OBJECTIVE OF THE STUDY

- To underline the significance and concept of connecting unbanked people to formal financial channel.
- To study the ecosystem and changing phase of Financial Inclusion drive in the era of digital transformation.
- To understand the dynamics of financial inclusion in terms of product and services offered under the drive.

3. RESEARCH METHODS

The study involves an analysis of component &functioning of Financial Inclusion scheme and intends to identify the model, progress and changing scenario. This is a descriptive study where the data are collected mostly from secondary sources by way of access to various Government policies/ programs including published sources.

4. NEED FOR INCLUSIVE GROWTH

Financial inclusion is not just about giving micro credit and other financial services to the poor rather it is an economic development tool whose objective is to assist poor to work their way out of poverty. Those who are unbanked live and work in what is known as the informal economy. They have no formal financial support to meet their credit needs and venture their small work. Without access to a bank, savings account, debit card, insurance, or line of credit, they must rely on informal means of managing money. They are exploited in the hands informal lenders in terms of insufficient choices, risky, expensive, and unpredictable.

Being included in the formal financial system helps people Make day-to-day transactions, including sending and receiving money, making small saving resulting in smooth consumption and building productive capacity, manage cash flow fluctuations, mitigate shocks and manage expenses related to unexpected events and improve their overall welfare..The benefits of financial inclusion are not only significant for individuals beneficiary but for economies also. Financial inclusion is linked to a country's economic and social development, and plays a role in reducing extreme poverty. It is expected to utilize the massively untapped potential of the bottom-of-pyramid section of Indian economy

5. PROGRESSION OF FINANCIAL INCLUSION IN INDIA

The need for financial inclusion was felt when even after 70 years of independence 40% of the population is still excluded from access to banking products. The major factors contributed for this scenario is poverty, illiteracy and lack of regular source of income besides deficient supply side system in terms of lack of reach, high cost of transactions and documentary formalities.

The idea of financial inclusion was included in the spirit of nationalization of banks in 1969 and 1980 and since then Financial inclusion has became the integral part of banking business model included in schemes for priority sector lending. In order to extend the banking services to large sections of the rural people government has nationalized the banks 1969 & 1980. RRBs were introduced in 1975. Till then the formal structure for rural finance had the problems of complicated-unimaginative policies and procedures, political interference, distant

location, short banking hours were some of the limitations.

Looking at the stories of financial intermediary's initiative around the globe, Indian government and NGO established similar micro finance groups in India called self help groups (SHG). Such programmes later on got much recognition with NABARD and achieved a remarkable growth by harnessing synergies created by flexibility of informal micro credit system and affordability of formal banking. The real thrust came in 2005 when RBI has highlighted the significance of FI in its policy statement. The FI plans basically included self-set targets in covering unbanked villages, deployment of business correspondents, Rupay, use of digital modes, no frill accounts etc. Other plans for disbursement of loans like Kisan credit card scheme and general credit cards were also introduced. In recent years the introduction and collaboration of Fintech firms and proliferation of alternative delivery channels aided the process of financialinclusion on large scale. NABARD estimates that there was a net addition of 6.73 lakh SHGs during the year 2016-17 increasing the number of SHGs having savings linkage to 85.76 lakh as on 31 March 2017

Initially when banks started their formal journey of FI there were only 40% population covered under banking. Although there are no concrete data on achievement now but according to informal estimates now around 62% population have access to formal banking. Table 2 shows the Progress of financial inclusion on the parameters such as the number of outlets (branches and BCs), Basic Savings Bank Deposit Accounts (BSBDAs), overdraft facilities availed in those accounts, transactions in Kisan Credit Cards (KCCs) and General Credit Card (GCC) accounts and transactions through the Business Correspondent-Information and Communication Technology (BC-ICT) channel. The progress made on these parameters as reported by banks as at end-March 2018 is depicted in table 1.2 below:

Table 1.2: Financial Inclusion: a Progress Report

Particulars	End-March 2010	End-March 2017	End-March 2018**
1	2	3	4
Banking Outlets in Villages – Branches	33,378	50,860	50,805
Banking Outlets in Villages>2000-BCs	8,390	1,05,402	1,00,802
Banking Outlets in Villages<2000- BCs	25,784	4,38,070	4,14,515
Total Banking Outlets in Villages – BCs	34,174	5,43,472	5,15,317
Banking Outlets in Villages – Other Modes	142	3,761	3,425
Banking Outlets in Villages –Total	67,694	5,98,093	5,69,547
Urban locations covered through BCs	447	1,02,865	1,42,959
BSBDA - Through branches (No. in Million)	60	254	247
BSBDA - Through branches (Amt. in Billion)	44	691	731
BSBDA - Through BCs (No. in Million)	13	280	289
BSBDA - Through BCs (Amt. in Billion)	11	285	391
BSBDA - Total (No. in Million)	73	533	536
BSBDA - Total (Amt. in Billion)	55	977	1,121
OD facility availed in BSBDAs (No. in million)	0.2	9	6
OD facility availed in BSBDAs (Amt. in Billion)	0.1	17	4
KCC - Total (No. in Million)	24	46	46
KCC - Total (Amt. in Billion)	1,240	5,805	6,096
GCC - Total (No. in Million)	1	13	12
GCC - Total (Amt. in Billion)	35	2,117	1,498
ICT-A/Cs-BC-Total Transactions (Number in million)	27	1,159	1,489
ICT-A/Cs-BC-Total Transactions (Amt. in billion)	7	2,652	4,292

***: Provisional.*
Source: Annual Report RBI.

6. 5PS OF FINANCIAL INCLUSION

Looking at the demographics of the country and strategies of financial inclusion participants we can discuss the 5Ps of financial inclusion.These strategies arebased on three aspects around which financial inclusion initiatives need to be structured—resource-driven, efficiency-driven and innovation-driven. These 5Ps are Product, Price, Place, Protection& Profit (as listed by former RBI Governor Mr. RaghuramRajan)

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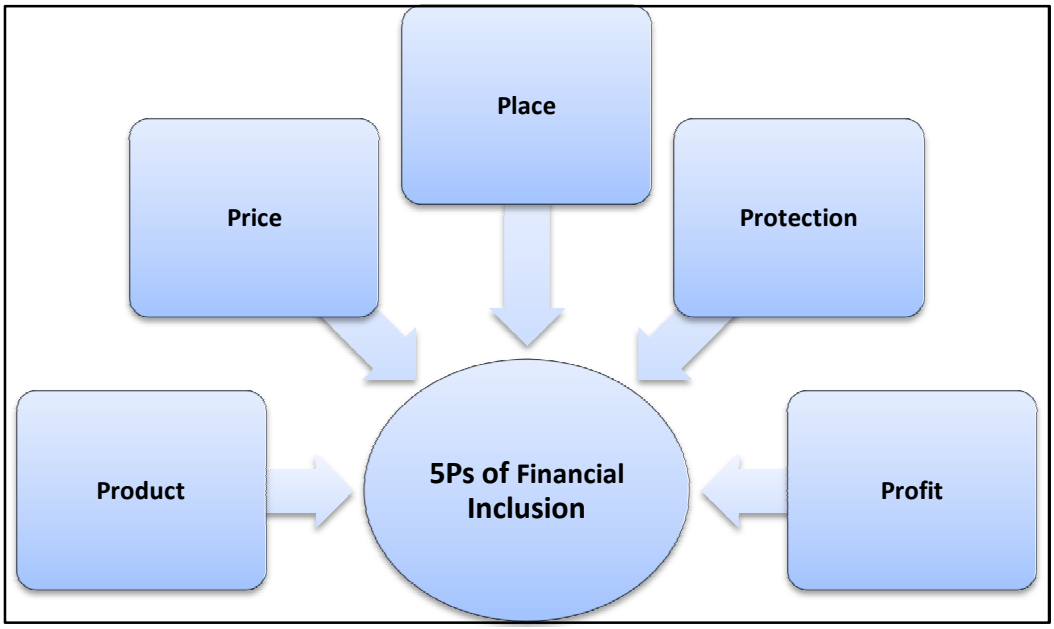

Product: Beneficiaries of financial inclusion plans have unique constraints and unique financial needs. Customer concentric design is the key for the wide adoption of micro credit products. Customer concentric means understanding the demand and transforming access to usage which is the key to real financial inclusion. Simple design of credit product features and services that address the problems and needs of the beneficiary can derive the success of FI Schemes. So the focal point needs to the customers not the products. Flexibility and convenience is the main product strategy.

Place: Financial inclusion cannot penetrate to the remotest location or happen on a large scale without the strategic lineages and partnerships between players. Third party collaboration to make the products accessible in locality is the key to success here. Consumer education and financial literacy the key to protect beneficiary and participants from financial and default risk. New players and new partnerships, new models of collaboration to promote the accessibility and distribution are the need of the structure that we have in our country, as in MUDRA scheme (PMMY). Regional issues should be considered in designing the promotional strategies of the scheme.

Price: Price refers to the cost of credit in terms of transactional cost and interest rate. Affordability is the key point here not only for credit but for the range of financial deepening which would further broaden the access to additional savings, insurance, payments etc. The continuum of financial institutions should strive to reduce various cost associated operating and distribution of financial products and services. At the same time ensure a price which within the paying capacity of the beneficiary

Profit: Financial inclusion cannot be achieved without it being profitable from supplier point of view and affordable from demand side.India is expected to grow 7% YoY so here lies a huge opportunity for banks to grow profitably by being more inclusive. Players should refine their strategies for financial inclusion and create commercially sustainable business models. Without profit the long term incentive to remain in the business cannot be ascertained. Need is for the innovative business model with strong focus on financial inclusion.

Protection: New and inexperienced customers will require protection. The RBI is briefing up the consumer protection code, emphasizing the need for suitable products that are simple and easy to understand. In order to bolster customer confidence levels in financial services, appropriate preventive mechanisms as well as advanced complaints resolution systems are necessary to ensure customer's funds are safe and secure.Protection also entail guard from corruption and frauds.

7. FINANCIAL INCLUSION IN DIGITAL ERA

Digital financial inclusion means digital network access to provide financial services to unbanked population. Globally, 1.7 billion adults are excluded from banking services, yet two-thirds of them own a mobile phone that could help them access financial services. Digital technology could take advantage of existing cash transactions to bring people into the financial system. New data on mobile phone ownership and internet access show extraordinary opportunities to use digital technology to achieve the target of much needed financial inclusion. In April 2017, India had around 730.7 million mobile users. About 46% of them did not have bank accounts. Looking at the story of South Africa that has a large rural population with no access to the traditional banking channel but high mobile penetration, banks have developed many innovative products, using mobile telephony and the postal network, to spread financial inclusion.

In the Indian context in recent year the growth of mobile

users has increased the scope of accessing banking and financial services to the masses. But there are some challenges also at the same time.Despite of internet connectivity there is a lack of interest and apprehension of unorganized players that profit this. Partnership between banks and mobile network operators offer tremendous potential to reach to unserved but collaboration in terms of deal negotiation is a big challenge for players and regulators also. As of now banks and mobile service providers seem to be using each other's database to sell products and not spread banking.

Requisite of Financial inclusion Model in the era of digital advancement

- Biometric enabled unique identification
- Support for remote account opening
- Access points through Business Correspondents.
- Channelizing all government to people payments like benefits and subsidies through digital payments
- Ensuring adequate interoperability of faster payment system.
- Joint support from government and private players to develop infrastructure that support micro financing.

In the last decade India has achieved a milestone in some of the aspects above. Implementation of Aadhar cards is a landmark in this regard. It allows full digital participation since the identity has the multiple functions that include banking, health and payments of government benefits and subsidies. Digitalization not only brings better access but greater choice and low cost of transaction and expands outreach to new product market.

8. FINANCIAL INCLUSION INITIATIVE IN INDIA

- **Jan DhanYojana:** Upto May 2018 the number of new account opened was 316.6 million with number of debit cards issued 238 million.(as per PMJDY website)
- **Aadhar**(national biometric identification to simplify account opening.Progress was driven by India, where a government policy to increase financial inclusion through biometric identification pushed the share with an account up to 80%, with big gains among women and poorer adults.
- Compulsory requirement of opening 25% new branches in tier 5 and tier 6 cities.
- Refinance facilities for microcredit under the scheme MUDRA (PMMY).
- Licensing of new and specialized banks like payment banks.
- Scaling up Financial literacy campaign & strict norms for players in this regard.
- Few social security schemes like Atal Pension Yojana, Pradhan Mantri Suraksha Bima Yojana, Pradhan Mantri Jeevan Jyoti Bima Yojana, Varishtha Pension BimaYojana.
- Stand up India scheme

9. CONCLUSION

In the large magnitude as in our country, for inclusive growth we need to create a ecosystem as well as network of factors both banking and non banking, financial regulators, Fintech companies and key participants that work to bring up the percentage of banked people and foster inclusive growth in the country.

Financial inclusion is not about transactional account but this is the first step to get unbanked people included in the financial ecosystem. When people have credit support and as they progress they ultimately have the option to graduate to savings and user of other financial products & be economically uplifted. Payment banks permission by RBI is the remarkable step in this regard. Banks cannot reach wide participants in rural areas by physical branches so linkages schemes with third party that is already in place in that area is important. Mainstream banks lineages will RRBs, MFIs, NBFCs, and SHGs is crucial for road ahead. Unless financial inclusion concept becomes mass agenda the objectives of inclusive growth, poverty alleviation, and improving macro economics cannot be achieved. Permanent remedy is possible only if the borrowed money is used for economically productive activities and a performance indicator to ensure that accounts are not only opened but remain active. Otherwise programs cannot assure their self sustainability to poverty reduction or inclusive growth.

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Impact of Customer Relationship Management on Customer Satisfaction

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ABSTRACT

Customer Relationship Management is considered as one of the most important processes for the profitability and success of an organization. It is the strategy that unites information technology with marketing and other functions of the organization. With effective implementation of Customer Relationship Management (CRM), technology, people and processes work in synergy that results in higher level of customer satisfaction, reduction of operational costs and increase in profitability. As a result of globalization and increase in competition, marketers need to focus more on building long-term profitable relationships with customers. This paper aims to determine the impact of customer relationship management on customer satisfaction. Secondary data and literature has been used to explore the topic. The findings and observations of the study might be helpful to the academicians, policy makers and marketing managers of the organizations.

Keywords: Customer Relationship Management, Customer Satisfaction, Profitability, Strategy, Information Technology.

1. INTRODUCTION

Customer Relationship Management (CRM) is the process of collecting and maintaining individual customers' data to enhance customer loyalty, customer-lifetime-value and profitability. It can also be defined as the process of managing detailed information about individual customers and all customer touch points to maximize customer loyalty. Marketers that practice CRM, are more efficient in One-to-one Marketing. CRM also helps in increasing value of customer base. Customer Relationship Management helps in improving customer satisfaction by reducing the rate of defection, increasing the life customer relationship enhancing "Share of Wallet" of each customer through Cross-selling and Up-selling, making low profit customer more profitable and focusing high-value customers. Individual customers' data, collected and analyzed for CRM, is used to identify prospects, to reactivate customer purchases and to decide on various offers for different customers. As a result, marketers experience increase in customer loyalty followed by greater customer satisfaction.

This study aims to determine the impact of Customer Relationship Management (CRM) on customer satisfaction. The study intends to identify whether there is any difference in customer satisfaction for the marketers that practice customer relationship management and for others that do not practice customer relationship management.

2. LITERATURE REVIEW

Customer Relationship Management (CRM) has been defined as a comprehensive process in the organization that focuses on acquiring, retaining and partnering with some specific customers for creating better value for the organization and the customers (Parvatiyar and Sheth. 2004). It is a comprehensive marketing strategy that emphasizes on the integration of technology, process and all other business functions around the customer (Anton and Hock, 2002). CRM is the key competitive strategy the marketers practice to emphasize on customer needs and to integrate customer focusing approach throughout the organization (Becker, 2009).

Customer Relationship Management helps marketers to understand customers' characteristics because this can help them to achieve the main objective of the organization that is customer attraction and customer satisfaction (Hosseini, 2009). However, researchers have further divided theses two objectives into four stages viz. customer identification, customer attraction, customer orientation and customer development (Meyer, 2010). This trend shows some modifications in the goal of winning customers (Mendoza, 2006). Marketers that focus on maintaining their presence try to build strong relationship with their customers, Customer relationship management is very important for marketers in accomplishing long-term goals. The success of marketers in accomplishing goals is largely influenced by efficiency of management of long-term relationships with customers (Nguyen, 2007). Marketers of goods and services are required to determine customers' characteristics as this helps them to achieve long-term organizational goals like customer satisfaction and retention (Hosseini, 2009). A large number of marketers have deployed customer relationship management system for improving the process of decision-making and providing the best quality goods and services. Building long-term relationship with customers is beneficial for both customers and marketers (Payne and Frow, 2005).

3. RESEARCH METHODOLOGY

A comprehensive study has been conducted to determine the impact of customer relationship management on

customer satisfaction. While choosing a research method, the selection is not only influenced by fact, which method is the most suitable method for that study, but also by the researcher's knowledge, resources and experience. Using the right methods and techniques for research ensures that data is collected in a standardized and scientific manner. It also ensures better results, and credible findings.

In the present study, to fulfill the objective of the study data has been collected through secondary literature study. Review of literature helped in exploring the subject and determining the impact of customer relationship management on customer satisfaction.

4. ANALYSIS

Analysis of literature and secondary studies shows that there is a relationship between customer relationship management and customer satisfaction. Marketers that implement and practice customer relationship management experience higher levels of customer satisfaction. It has been observed that customer satisfaction is a function of customer relationship management. It is also observed that customer relationship management is not only a function of marketing but also is influenced by human resource management and financial management.

5. FINDINGS

This study finds that customer relationship management influences customer satisfaction. Customer relationship management is the process in which marketers tend to manage long-term profitable relationship with customers. It is also found that the role of human resource management is also very important in customer relationship management. Marketers can achieve the highest level of customer satisfaction only when the employees are skilled, trained, satisfied and motivated. Marketers need to improve the hiring process to attract and hire the best talent from the industry. Then, these employees must be trained according to the customer service standards and norms of the marketer. Different internal and external training sessions must be conducted to ensure suitable training of the employees. Human resource manager also needs to take care of employees motivation. Motivated employees are more likely to serve customers efficiently, that subsequently enhances customer satisfaction. For employees motivation, an effective reward and recognition system must be implemented. Employee's excursion tours and trips can also be arranged. Finance department must also understand the importance of customer relationship management and budget needs to be allocated for implementation of customer relationship management system.

6. CONCLUSION

Customer relationship management is one of the most important functions of an organization. It is relevant for all types of products including consumer products, institutional products, government and non-profit organizations products. Through this study, the impact of customer relationship management on customer satisfaction has been determined. It is concluded that customer relationship management largely influences customer satisfaction. It is also observed that implementation of customer relationship management system is a company-wide process that includes all the departments and functions of the organization.

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Proposed Transmission Technology for Data Centers Core Routers

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ABSTRACT

In the recent past, the demand for higher bandwidth has increased tremendously, due to the data centric applications like TV on demand, internet etc. The current electronic technology have shown bottleneck in providing very high speed data communication. Thus in near future an alternative transmission technology would be required to support such a high data rates (160 Gbps). The optical fiber cable has the potential to support tremendous data (Tbps). Therefore, optical communication is considered as next generation data transfer technology.

Keywords: Data Center, Cloud, Router Switches, Optical Switching.

1. INTRODUCTION

In 1990, digital cross connect (DXC) was introduced. Five years later, optical add drop multiplexer (OADM) was developed. Then optical cross connect (OXC), passive optical network (PON), optical label switching (OLS), optical burst switching (OBS) and optical packet switching (OPS) was introduced and some of the technologies are also implemented in some part of the globe as test bed [1,2].

The technology is the major obstacle for the optical packet switching (OPS) deployment. Gigabit rates are too high for the slowly improving speed of electronic circuits. Optical technology is thus a promising solution, but still in early phases of development.

The key technology issues that play important role in OPS are fast optical packet header processing, switching and buffering.

2. DATA CENTER INFRASTRUCTURE

We start by investigating a portion of the communication and network necessities in developing large-scale data centers. The principal question is the objective scale. Even though economies of scale propose that data centers should to be as big as it can be, normally estimated by the measure of energy accessible for the site; data centers ought to likewise be circulated over the planet for adaptation to fault tolerance and latency area. The other thing is the whole computation and communication limit needed by an objective application. Let us consider person to person communication as an example. Their sites should basically store and replicate each client created content over a bunch worth of machines.

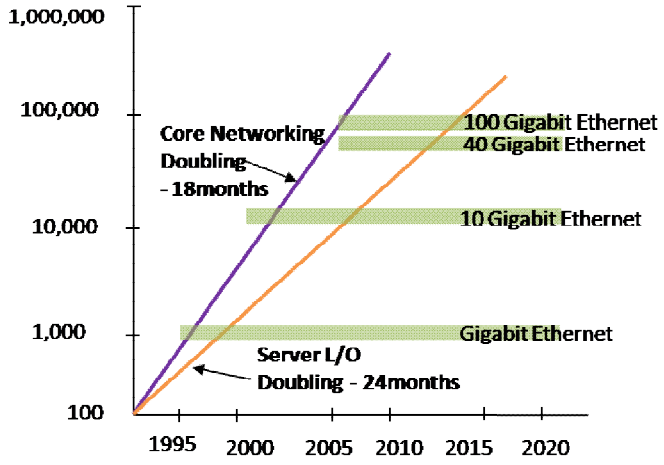

Figure 1: Background: Data Center Network Architecture

The network prerequisites giving support to these kinds of administrations are likewise noteworthy. For every outside demand, a huge number of servers must be reached in parallel to fulfill such demand. The last inquiry is the measure that particular servers are multiplexed crosswise over applications and properties. For example, any portal, Yahoo! may have several individual client confronting administrations alongside a comparable number of inward applications to help mass information handling, index production, advertisements arrangement, and general business bolster.

Although we do not have any definite information regarding these questions, on adjust we place a pattern to expanding register densities in data centers positively at the level of a huge number of servers. It is obviously conceivable to segment singular applications to keep running on committed machines with a devoted interconnect, bringing about smaller-scale networks.

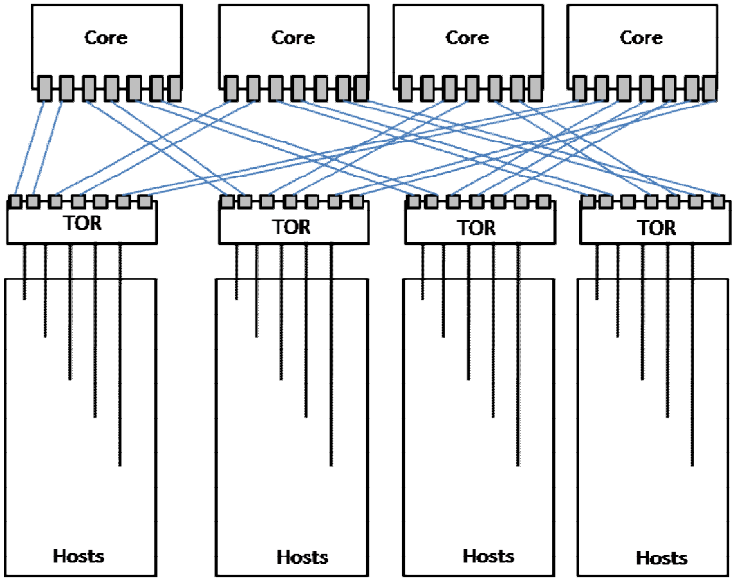

Figure 2 (a) Traditional Data centers design

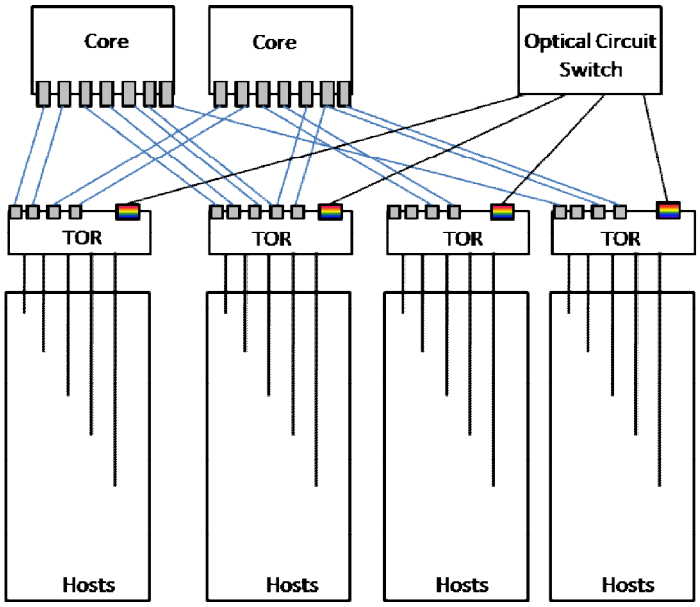

Figure 2 (b) Emerging Data centers design

The incremental expense of scaling the network will in a perfect world be unobtrusive and the adaptability advantages of both moving calculation powerfully and supporting ever-bigger applications are extensive. Thus, we take interconnects that must generally scale with the quantity of servers in the data center. Figure 2(a) demonstrates the structure of a normal data center networks. Individual racks house contains several servers, which associate with a Top-of-Rack (ToR) switch through copper cables. These ToR switches connects to core switching layer through optical transceivers.

To develop the bigger scale networks, every ToR switch would associate with all accessible core switches. If a ToR has m uplinks, then it connects to m core switches. If each core switch has n number of ports, then it would supports n ToR connections. In the event that every ToR utilizes u downlinks hosts then the total network scales to nxu ports.

Figure 2(b) demonstrates a data center design for future

generation that utilizes optical circuit switching (OCS) as a major technology. We make the replacement of certain part of the center electrical switches with optical circuit switches. Numerous 10G SFP+ (enhanced small form-factor pluggable) transceivers are supplanted with integrated CWDM (coarse wavelength division multiplexing) transceivers (e.g., 4x10G QSFP-LR4) to total electrical channels with a typical goal. While OCS can't carry out per- packet switching, it can switch all the long-lived flows between aggregation points. The expense of per-port of an OCS is aggressive with, if not inherently less expensive than, the comparable EPS. In any case, it has greater limit through wavelength division multiplexing and less consumption of power. WDM decreases cabling complexity, a critical test in the data center. At long last, OCS dispenses with some part of the optical transceivers and EPS ports by wiping out a subset of the needed OEO variation.

Optics assumes a basic part in conveying on the capability of the data center network and tending to the above difficulties. Notwithstanding, completely understanding its potential in the data center network will require a reconsidering of the optical innovation segments generally utilized for telecom and will require enhancements focusing on the particular data center network arrangement conditions.

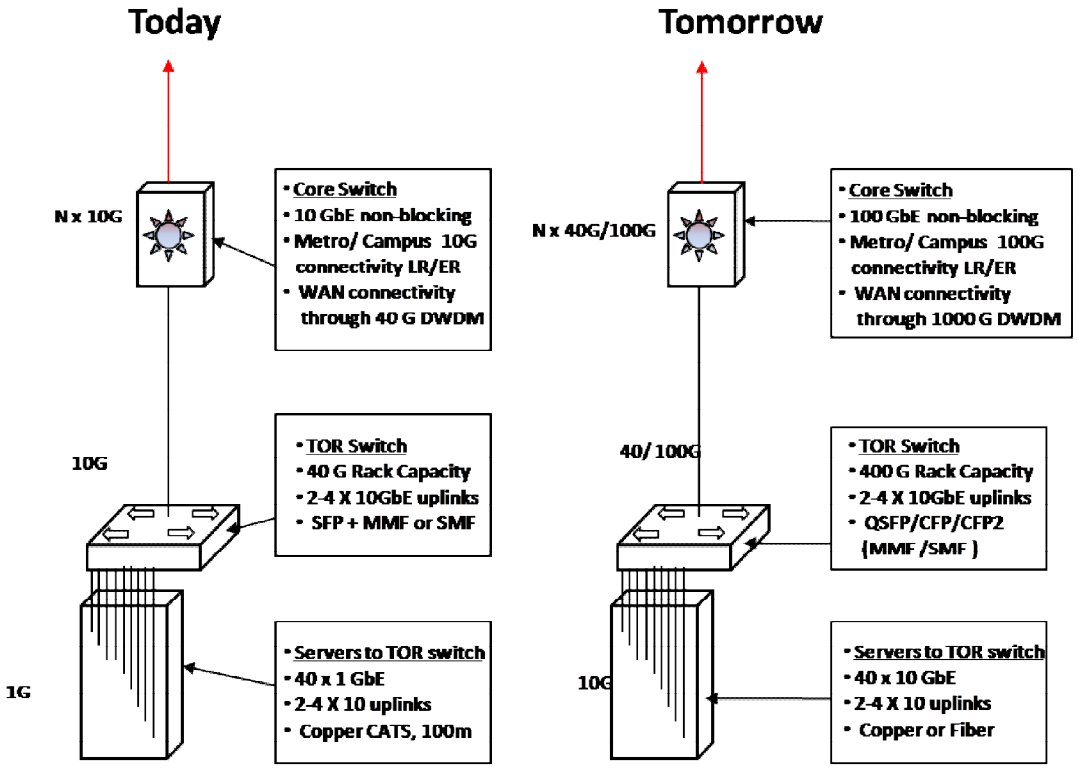

Figure 3: Technology requirements

3. TODAY AND TOMORROW

Today networks are basically runs on electronics, with 1 Gigabyte Ethernet (GbE) (Fig.3). Considering 40 links, therefore ToR switches connects to server with maximum capacity of 40 G. these ToR switches connects to core switches. These core switches provide 10 GbE non-blocking connectivity, while in LAN, a connection speed of 40 Gbps can be achieved using DWDM., while in near future it is desirable that the servers speed should be at-least 10 times, while hierarchy above this should be 4-10 times now.

4. LITERATURE SURVEY

In Table 1, recently presented optical packet switch designs are discussed stating their novelly and details of exclusive feature of each of the design.

Table 1: Comparative Analysis of Recent Switch Designs

S. No.	Authors	Novelty	Details	Ref.
1	Y.Yin et. al., [2012]	Inclusion of Negative Acknowledgement	Dropped packets can be re-transmitted	[8]

S. No.	Authors	Novelty	Details	Ref.
2	K. Xi et. al., [2012]	Buffer less design	combines the best features of electronics and optics	[9]
3	Wu G. et. al., [2015]	WDM buffer less design	scalable AWG-based optical interconnection	[10]
4	Rastegarfar, H. [2015]	WDM buffer design	Q-factor degradation to load-balancer performance	[11]
5	Shukla, V. et. al., [2016]	WDM buffer design with loss compensation	BER and PLP performance is measured	[12]
6	J. Wang et. al. [2016]	Hybrid Buffering	Using hybrid buffer both short and long duration storage possible	[7]
7	Shukla, V. et. al., [2016]	WDM buffer design with loss compensation	Cross layer optimization	[13]
8	Singh, A . et. al., [2018]	Hybrid Buffer	Dissipated energy calculation	[17]
9	Celik, A . et. al., [2018]	Optical wireless	Data center design for optical wireless	[19]
10	Singh, A . et. al., [2019]	Hybrid Buffer	Optical and electronic buffer utilization at different load is evaluated	[15]
11	Nigam, A . et.al., [2019]	Re-circulating type buffers	buffer length is chosen to reduce ASE noise	[16]

OPS deployment depends on how fast switching can be performed. While selecting the suitable switching scheme for OPS includes following criterion should be kept in mind:

Switching time – for fast optical packet switching, the switching components should be able to configure in less than 10 ns in order to keep short overhead.

Throughput– is defined as the maximum traffic that can pass though the network without any blocking is known as throughput and it should be high.

Signal degradation- includes optical loss, crosstalk and noise degradation. Signal degradation limits the transmission distance. To recover signal form degradation, regeneration of signal is necessary, but optical 3R does not exist.

Photonic Packet Switching- In optical switching based the controlling of data is assumed to be optical in nature. But optical computing does not exist, therefore a technique, where data controlling is done by electronics while data propagation remains in optical form and refereed as photonic packet switching [3-5].

Figure 4 shows the schematic diagram of a generic photonic packet switch. Its key functions of photonic packet switching [1,3,4] are:

- Control,
- Packet routing,
- Packet synchronization,
- Clock recovery,
- Contention resolution,
- Packet buffering and
- Packet header replacement.

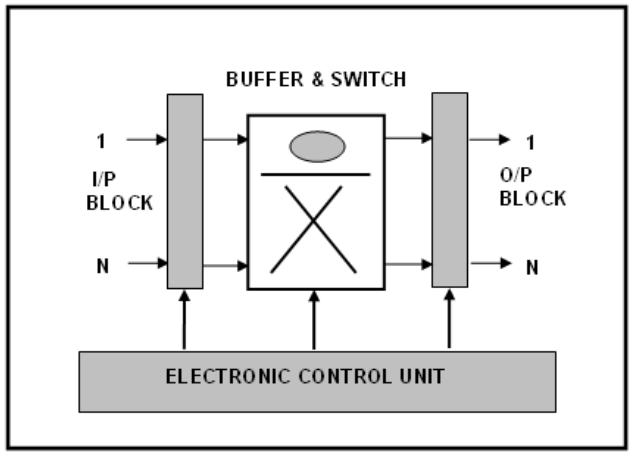

Figure 4: Generic layout of photonic packet switch [9]

5. CONTROL

The main function of control units is read the header, and use the information stored in the database, decides the correct outgoing port, and then configures necessary tunable components sitting inside the switch in such a way, that a packet can be directed to appropriate output port [1].

6. ROUTING

Routing is the selection of the appropriate path, on which data has to be forwarded which will lead to the correct destination. Routing of the packets from switch input to

switch output is performed at each switching node [1]. Here, packets headers are separated, processed and correct switches state are created using the stored information in the header.

7. SYNCHRONIZATION

Synchronization is a process, where time alignment of packets at the switch input ports is done. Synchronization is not necessary in unslotted networks [1]. However, in synchronized networks, efficient operation of switch is possible, because time can be assumed slotted, and all switch state changes only at slot boundaries.

8. CLOCK RECOVERY

A clock recovery is must, within a small time in order to unambiguously detect data bits, and helps us in anticipate packet detection if synchronous time slots are used.

9. CONTENTION RESOLUTION

In optical network, switches are connected in random manner. Hence, there is a possibility that more than one packet at the input of a switch may arrive, and looking for the same outgoing port, contention may happen [5]. At each node, only one packet will be processed in a single time slot. Hence, only one packet can be forwarded to an output link at a given time, and for other packets, some mechanism is required to save them from dropping at the switch input. To resolve such contention, three solutions are studied:

- Optical buffering,
- Deflection routing, and
- Wavelength conversion.

In optical buffering, all contending packets, except one, are stored in fiber delay lines (FDLs) with the help of the other optical (tunable/static) components. In deflection routing, all contending packets, except one, are routed and forwarded to some other link. In wavelength conversion, contending packets are routed on the same outgoing link but on the different wavelength. Each of these methods has its own merits and demerits. For the above three solutions for contention resolution, wavelength conversion is the easiest to implement, but the cost of the wavelength converter is a major issue. Deflection routing is cost effective as, this does not require any additional hardware. But, in this process, latency is higher, therefore, throughput is less. Optical buffering provides solution with low latency at moderate cost. Thus, using these methods, alone or in combinations, can help us in achieving high throughput and efficiency in the optical packet switching network. In addition, optical switches can also block the contending packets, drop (in case when buffer is full) or deflect the packet to control traffic flow and resolve contention. In this work, combination of both wavelength conversion and optical buffering is used very efficiently in switch designing [6].

10. BUFFERING IN PACKET SWITCHING

When a data packet reaches an intermediate node, its header will be extracted and processed and control module decides on its path. During this time interval, the packet has to be stored somewhere. This storing is done through optical fiber delay line. As soon as decision is made regarding the forwarded path, the packet is retrieved from the delay lines, and forwarded to output port as per the decision. Advanced electronic RAMs based on CMOS technology, can be used for buffering of packets, however, electronic RAMs have speed limitations in comparison to the speed of light, which will limit the speed and capacity and performance of photonic packet switching system. Moreover, this approach requires optical to electronic (O/E) conversion, when packets are written into and E/O conversion, when packets read out of electronic RAMs [7]. All-optical RAM suitable for photonic packet switching does not exist. Therefore, as an alternative, optical fiber delay lines with other components, such as, optical gates, optical splitter/combiner, optical amplifiers, and tunable/static wavelength converters, etc. are used to realize photonic buffering. In general, optical fiber delay lines-based buffers can be classified as:

- Travelling type
- Recirculating type.

A travelling–type optical buffer consists of series of multiple optical fiber delay lines, whose lengths are integral multiples of a packet duration, and optical switches are used to select various delay lines to select desired delay[5]. In re-circulating type buffer data keeps on revolving and the storage time of packet inside the buffer can be varied by changing the number of revolutions.

11. PACKET HEADER REPLACEMENT

In packet switching, messages are divided into data packets of fixed duration (payload) and header bytes are added to form a complete packet, before transmission. The header acts like the messenger, containing the information of destination address, sender address, size of payload, time to live etc. [2]. The data packets of message traverse in a network from one node to another optically, till it reaches its destination. Therefore, it may possible that the data packets pass through many optical nodes. As per the OPS rules, header will be processed at each intermediate switching node. As discussed above header will be processed electronically, therefore it is customary that the header has a relatively low fixed bit rate. The length of the packets can be variable or fixed. However, fixed length packets can significantly simplify the implementation of optical packet switch. The packet switching is a connectionless switching, and hence, does not require a link with a dedicated and reserved bandwidth. In OPS depending on the available bandwidth on different lines, any packet may take more than one possible path to reach its correct destination. In such a case, packet may arrive in a random order; a sequence number is assigned to each packet to ensure, that the packets are not misinterpreted. The size of the packets (fixed/variable) depends on the

network design structure. For the simplification of the OPS design, packets of equal length are considered in this proposed work, and it is also assumed that at each input, packets are synchronized.

12. METHODOLOGY TO DESIGN SWITCH

Data centres are essential infrastructure which is used for storing, processing and retrieval of data. Data centers manage critical data to clients in a Client/ Server environment. Currently, access and management of data is free of charge, therefore load on the data centers increasing exponentially and data centers is facing bottlenecks to meet increasing demands for network bandwidth without an excessive increase in power and infrastructure cost. In the current data centers networks tens of thousands of servers are connected parallelely in super-computing infrastructure. In data centers fiber optic technology can play a vital role. Using tunable wavelength converters (TWCs) wavelength domain can be used for the routing of information. The feasibility of wavelength routing in data centres relies primarily on wavelength tuning device that are ubiquitous in wavelength-routing network architecture. Optical packet switching systems have many advantages over their electronic counterparts, but the unavailability of of optical RAMs is a major bottleneck. In optical packet switching, in place of RAMs, fiber delay lines are considered as a viable solution for optical storage where packets can be stored in optical domain without O/E conversion. In electronic RAMs the numbers of stored packets are millions in number and information can be stored for longer duration, but in fiber delay lines storage duration is short and only some hundreds of packets can be stored. Thus, an efficient design of the optical switch which can satisfy large numbers of requirements need to be designed.

13. SCOPE OF PROPOSED TECHNOLOGY

In the present era, the application of data centre infrastructure has increased significantly in various domains. One of the main reasons is various internet applications like Google, YouTube, Netflix, Facebook, Twitter, data mining, etc. A big data centre such as Chicago data centre covering an area of about 700,000 square feet.

These large data centre provides the important facilities like storage, computation, communication, etc. Therefore, one must be very careful while designing the infrastructure and networking of the data centre as these factors decides the expenses on implementation and maintenance of the infrastructure. At present, industry use top of the rack (ToR) switches in majority. These switches are interconnected with various servers inside the rack. These servers are further connected with each other with the help of core/aggregation switches. This technique results in major bandwidth oversubscription on the links which in turn the architecture becomes more expensive. Moreover, the thermal dissipation also causes more power consumption which is not good for a proper architecture. Hence, it is important to search for an alternate option for the future data center traffic.

In general, numerous several tiers exist for network solutions like two stages, namely edge and core, while an additional intermediate tier i.e. aggregation tier between core and edge tiers in the case of three tier centre. Scalability is achieved by increasing the number of tiers. The recent researches are focused on core/aggregation switches.

14. CONCLUSION

In optical data centers distance between the servers is a few meters, and they are interconnected. However due to short distance communication wireless communication can be used. Therefore, servers to server`s connection can be established using optical orthogonal frequency division multiplexing (O-OFDM).

Hence after implementing above mentioned transmission technology, we will be able to transmit the data with efficient manner. Transmission will become more reliable and fast.

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Technology Adoption and Diffusion

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ABSTRACT

Technology adoption and diffusion differs in the terms of level and time issues. Diffusion refers to the fact that how technology has spread within a group, community or country whereas adoption refers more at the individual level as compared to community or country level or in a social system. In other words, we can say that diffusion would describe how the process of adoption went. For any technology or innovation to be successful, it is needed to have a good diffusion of technology which further means that it should be satisfactory adopted. So, the most important is the adoption of technology as if the adoption is not good then it won't make the technology successful as any technology or innovation is done for the large group of people not for small group of people. Even if the adoption of technology at low level is satisfactory then the next step is to make it at larger level that is to the diffusion level, only if it is able to make it at diffusion level, we can say that technology or innovation is successful and also it is needed to be updated time to time.

Keywords: Diffusion, Adoption, Social System.

1. INTRODUCTION

Technology adoption and diffusion differs in the terms of level and time issues. Diffusion refers to the fact that how technology has spread within a group, community or country whereas adoption refers more at the individual level as compared to community or country level.In other words, we can say that diffusion would describe how the process of adoption went.

Diffusion of technology is basically a theory that explains how, why and at which rate new ideas and innovations spread. Diffusion is the process by which a technology is communicated over time among the members of a particular audience.

The success of any technology or innovations depends on the levels of diffusion and adopters. Rogers proposes that four elements influence the spread of new idea: the innovation itself, communication channels, time and a social system. Also, this process relies heavily on human capital. The innovation must be broadly adopted in order to self-supporting.Inside the rate of implementation, there is a point at which an innovation reaches climax.

The adopters are categorized as innovators, early adopters, early majority, late majority and laggards. The criteria for categorization are innovativeness, defined as the degree to which an individual adopts a new idea.

2. DIFFUSION

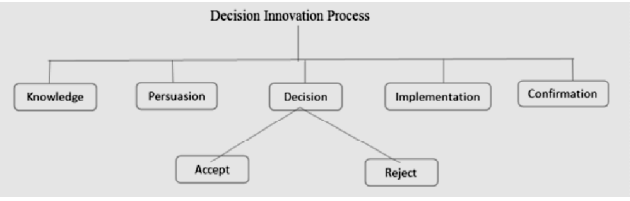
To understand that how the technology diffusion takes place first we need to understand their elements as described by Rogers.

First one is innovation.

- Innovation is a new initiative, creative opinion, new imaginations in form of gadget or process.
- *Communication channel:* Diffusion takes place among people or organizations. Communication channels allow the transfer of information from one to another unit. Relay patterns or capabilities must be established between parties as a minimum for diffusion to take place.
- *Time:* The passage of time is necessary for technology or innovation to be adopted; they are rarely adopted instantaneously.
- *Social System:* The social system is the mixture of external influences (mass media, surfactants, organizational or governmental mandates) and internal influences (strong and weak social relationships, distance from opinion leaders). There are various roles in a social system, and their combination represents the total influences on a potential adopter.

3. PROCESS OF DIFFUSION

Diffusion occurs through a five-step decision making process. It occurs through a series of communication channels over a period of time among the members of similar social system. According to Rogers, five steps are: awareness, interest, evaluation, trial and adoption. An individual can be decline an innovation at any time during or after the acceptance process. Later on, Rogers changes his terminology of five stages to: knowledge, persuasion, decision, implementation and confirmation. However, the descriptions of the categories have reminded similar throughout the editions.Five stages in the decision innovation process.



They are also known as five stages of adoption process. They are described as:

- *Knowledge/Awareness:* This is the individual part to first exposed to an innovation. For the period of this stage the individual has not yet been motivated to find out more information about the innovation.
- *Persuasion:* The individual is involved in the innovation and actively seeks connected to information/details.
- *Decision:* The individual perception regarding the concept of the change and weighs the advantages / disadvantages of using the innovation and decides whether to adopt or reject the innovation. Due to individualistic nature of this stage, this stage is the most difficult stage on which to acquire empirical evidence.
- *Implementation:* The individual employs the innovation to varying degree depending on the situation. In this stage the individual also determines the utility of the innovation and may search for additional information about it.
- *Confirmation/Continuation:* The individual clinch his/her decision to prolong using the innovation. This stage is both intrapersonal and interpersonal; justification the group has made the right decision.

4. DECISIONS

Two aspectsverify what type anexacting decision is:

- Whether the decision is made freely and implemented gladly
- Who makes the decision

Based on these thoughts, three types of innovation decisions have been identified.

- Optional Innovation Decision:It is made by an individual who is in some way well-known from others.
- Collective Innovation Decision: This is made collectively by all participants.
- Authority Innovative Decision:This is made for the entire social system by individuals in positions of influence or power.

5. ADOPTION

As we have seen that in the process of diffusion, adoption is basic and important process because the success at the diffusion level depends on the rate of adoption. The rate of adoption is defined as the relative speed at which participants adopt a technology. Rate is usually measured by the length of time required for a certain percentage of members of a social system to adopt a technology. The rates of adoption for technologies are determined by an individual's adopter category. In general, firstly adopt an individuals require a shorter adoption period when compared to late adopters.

Within the adoption curve at some point the innovation reaches climax. This is due to the number of individual adopters ensures that the innovation is self-sustaining.

6. ADOPTION STRATEGIES

Rogers outlines several strategies in order to help an innovation reach this stage, including when an innovation adopted by a highly respected individual within a social network and creating an instinctive desire for a specific innovation. An additional strategy includes vaccinate an innovation into a group of individuals who would readily use said technology, as well as providing positive reactions and benefits for early adopters.

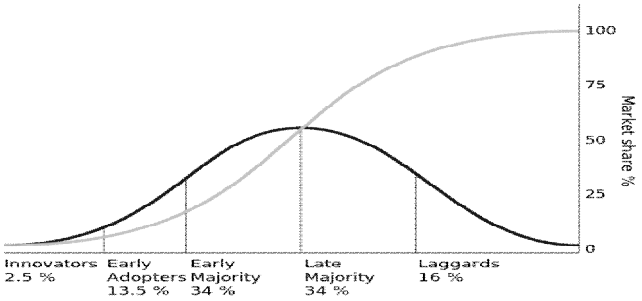
7. ADOPTER CATEGORIES

Rogers defines an adopter category as a classification of individuals within a social system on the basis of innovativeness.He suggested a total of five categories of adopters in order to systematize the utilization of adopter categories in diffusion research. The adoption of an innovation or technology follows an S-curve when plotted over a length of time. The categories of endorsers are: innovators, early adopters, before time majority, behind majority and laggards. In addition to the protectors and opinion leaders who exist within a given community, change agents may come from outside the neighbourhood. Change agents guide innovations to new communities – first through the gatekeepers, then through the opinion leaders, and so on through the community.

The description of adopter category is given below:

- *Innovators:* They are risk taker, have the highest social status, have financial liquidity, are social and have closest contact to scientific sources and communication with other innovators. Their risk acceptance allows them to adopt technologies that may eventually fail. Financial resources help absorb these failures.
- *Early adopters:* These individuals have the highest degree of judgment leadership among the adopter category. They have a higher social status, economic liquidity, higher education and are more socially forward than late adopters. They are more discrete in adoption choices than innovators. They are judicious choice of adoption to help them maintain a central communication position.
- *Early Majority:* they adopt an innovation after a varying degree of time that is significantly longer than the innovators and early adopters. Early majority have above average social status, contact with early adopters and seldom hold position of opinion leadership in a system.
- *Late Majority:* They adopt an innovation subsequent to the average participant. In this, an innovation with a high degree of cynicism and after the majority of society has adopted the innovation. They are typically skeptical about an innovation, have below average social status, and little financial liquidity, in contact with others in late majority and early majority and little opinion leadership.
- *Laggards:* They are the last category to adopt an innovation. If we make a difference in the some of the previous categories, individuals in this category show

little to no judgment leadership. These individuals typically have an aversion to change-agents. Its typically tend to fixed on "tradition", least social status, smallest financial liquidity, oldest among adopters, and in contact with only family and close friends.



The diffusion of innovation according to Rogers. Withsuccessive groups of consumers adopting the new technology(shown in blue), its market share (yellow) will eventuallyreach the saturation level. The blue curve is broken intosections of adopters.

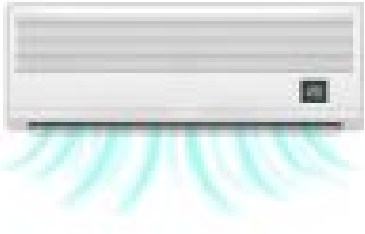
Peres, Muller and Mahajan suggested that diffusion is "the process of the market penetration of new products and services that is driven by social influences, which include all interdependencies among consumers that affect various market players with or without their explicit knowledge".

Eveland evaluated diffusion as, "technology is information, and exists only to the degree that people can put it into practice and use it to achieve values".

Diffusion of existing technologies has been measured using the above S curve. These technologies include personal computer, the internet and many more.

Radio

Television



Air Conditioner

VCR

Cloth Washer

Dishwasher

Refrigerator

Cordless Phone

Cellular phone

These data can act as a predicator for future innovations.

8. ROLE OF SOCIAL SYSTEM (OPINION LEADERS)

Not all the individuals exert an equal amount of influence over others. In this sense opinion leaders are influential in spreading either positive or negative information on innovation. Judgment leaders have the most influence during the evaluation stage of the innovation-decision process and on late adopters. Additionally, judgment leaders are usually have the greatercoverage to the mass media, more classy greater contact with change agents, more social experience and exposure, higher socioeconomic position, and more innovative than others.

9. FAILED DIFFUSION

Failed diffusion doesn't mean that the technology was adopted by nobody. Moderately, it often refers to diffusion that doesn't or approach 100% adoption due to its own weaknesses, competition from other innovations or simply a lack of awareness. A failed diffusion might be widely adopted within a certain cluster but fail to make an impact on more distantly related people. Networks that are over connected might suffer from a severity that prevents the changes an innovation might bring, as well. Sometimes, some innovations also fail due to the lack of local contribution and community participation.

10. CONCLUSION

For the technology or innovation to be self-sustained it must have a success at diffusion level and for that it must be 100% adopted at adoption process. And for adoption level to be successful it is necessary to have a proper awareness and knowledge about the technology to the adopters, have less and less imperfections or limitations or we can say it should be easily updatable according to the situation. Also, the opinions from the opinion leader i.e. from the social system must be positive so that it would be easy for the technology to be diffused among the members of society. If the diffusion however fails due to any reason then we should focus on its limitations or the group of people where the adoption basically fails and to look for the changes that could be made to that technology to be diffused successfully.

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Volatility Transmission between Futures and Spot market in Commodity Market (Soybean & Maize): An Empirical Study

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ABSTRACT

NCDEX is a leading Commodity Exchange for agriculture future trading in India. Our country is known for spices production both in terms of quality and quantity. Jeera and Turmeric are two important spices commodities which are highly trades since inception of commodities futures exchanges since 2003. Further, these two commodities have regular representation in the agri index of NCDEX, known as 'NKrish'.

The present study is based on the secondary data of closing prices of near month futures and the corresponding closing Spot prices at respective delivery centers of the commodity for the period from December-2012 to 2018. Eview-Ver.10 software is used to study the econometric analysis of the data.

The objective of the study the i) Cointegration relationship between daily futures and spot prices, ii) lead- lag relationship, iii) how the price discovery taking place iv) variance decomposition between the two market, v) Volatility spill over between the two markets. The tools used are : i) ADF test and PP test to test Stationarity of data, ii) Johansen test to find the Cointegration of the series, iii) Vector Error Correction Model (VECM), Wald test to find long and short term relation, iv) Ganger Causality test to find direction of causality, v) variance decomposition test to find influence of each other market, vi) ARCH and GARCH Test to study the Volatility spillover effect of each market on other market. The overall results of the above test indicate that the futures market is most useful in price discovery of the spot market of both commodities for various reasons.

Keywords: Stationarity, Cointegration, VECM, Price Discovery, Variance, Futures, Spot.

1. INTRODUCTION

NCDEX is professionally managed online Futures exchange well known for agriculture commodities trading since inception in 2003. The exchange's market share is 82% in agri Futures trading with 13000 terminals operating from more than 1000 locations across the country. Its agri Futures contract starts on 21st of every month and ends on 20th of the settlement month. Usually, the near month expiry Futures contracts arehighly liquid and hence, the futures price of near expiring month are taken for this econometric analysis purpose.

Soybean and Maize are highly traded agricultural commodities in NCDEX. It has consistent place in the agricultural index of NDEX, known as NKrishi Index (Earlier known as Dhaanya Index). Delivery center for Soybean is Indore of Madhya Pradesh and the Delivery center for Maize is Sangli (MAIZEKHARIF) and Gulbarga in Karnataka (MAIZERABI). Delivery logic is compulsory delivery for both products.

Ticker Symbol	Period for Testing	No.of Settlement Months	No.of Observations
SYBEANIDR	22.12.2012 to 20.12.2018	65	1410
MAIZERABIMAIZEKHARIF	22.12.2012 to 20.12.2018	71	1560

2. OBJECTIVE OF THE STUDY

- To study stationarity of Spot and Futures price series data by using Unit Root test.
- To understand counteraction relationship between Spot and Futures price series data.
- To comprehend the direction of relationship between Spot and Futures prices series.
- To analyze the volatility transmissioneffect over between Spot and Futures prices series during the period 2012 to 2018.

1. Unit Root Test:

Unit root test is an important and necessary test for analyzing time series data. Before testing Johansen's Cointegration test & Vector Error correction Model, the time series data hasbeenconfirmed for its stationarity. The commodities daily closing price data series (Futures and spot) is tested with Augmented Dickey Fuller (ADF) test and Phillip Perron (PP) test.It has been observed from the results that both the commodities price series data is non-stationary at level and stationary at 1st difference. Further,

it is noted from the E-Views Reports that:

- The absolute Test Statistic value is less than the Critical values of the variables (at 1%, 5% & 10% significance) at level.
- The Test Statistic value is more that the Critical value at 1st difference, and
- The Coefficient of the variable is negative in all reports.

These are mandatory conditionsto analyze whether data has unit root or not. Hence, it has been concluded that the data is non-stationary at level and stationary at 1st difference. Thus, price data is fit for conducting further tests like Cointegration test and VECM test.

ADF Test and PP test have been conducted to examine the stationarity of the variables.

2. Johansen's Co-Integration Test:

In order to analyze the nature of long run association between the futures and spot market prices of agriculture products, Johansen Cointegration test is used. The precondition of this Cointegration test is that the time series data should be stationary at first difference, but not at level.

The result of co-integration tests of both agriculture commodities is given in the Table.1A & 1B. The results conclude that there are two Co-integrated equations between the variables of soybean, and at most one co-integrated equation between the variables of Maize. Trace statistics as well as Max-Eigen statistics supports the presence of co-integration between the variable of both commodities. Hence, it has been concluded that there is long run equilibrium relationship between futures and spot market prices of Soybean and Maize commodities.

Table1A: Johansen's Co-Integration Test Cointegration between Daily Spot prices and Daily Futures prices of Soybean

Lag length selected	Cointegration test used	No. of cointegrating equations	Eigen Value	Trace Statistic	Critical value at 5%	Probability
1 to 11	A. Trace test	H0: r =0(None)	0.02911	48.7953	15.49471	0.0000
		H1:r<=1(At most 1)	0.00534	7.49298	3.841465	0.0062
	B. Max-Eigen value test	H0: r =0 (None)	0.02911	41.3023	14.26460	0.0000
		H1: r<=1 (At most 1)	0.00534	7.49298	3.841465	0.0062

Source: Author's Estimation.

Table 1B: Johansen's Co-Integration Test Cointegration between Daily Spot prices and Daily Futures prices of Maize

Lag length selected	Cointegration test used	No. of cointegrating equations	Eigen Value	Trace Statistic	Critical value at 5%	Probability
1 to 6	A. Trace test	H0: r =0(None)	0.01367	24.4172	15.49471	0.0018
		H1: r<=1 (At most 1)	0.00195	3.03988	3.841465	0.0812
	B. Max-Eigen value test	H0: r =0 (None)	0.01367	21.3773	14.26460	0.0032
		H1: r<=1 (At most 1)	0.00195	3.03988	3.841465	0.0812

Source: Author's Estimation.

3. Vector Error Correction Model (VECM):

Test of Long-term association: If the co-integration criterion is validated, then it facilitates the Error Correction Model. It is used to identify the market where the price discovery occurs.

Table.2A &2B shows the result of VECM test Soybean and Maize commodities. It can be observed that the coefficient term, C(1) ofSoybean and Maize commodities are negative and signification in both case when the Futures& the Spot is a dependent variable separately. This implies that there is bi-directional long run causality relationship between futures and spot price series in long run. It has been concluded that there is bi-directional long run relation in both commodities i.e. Soybean and Maize Futures market &Spot market price series. It reveals that any in-equilibrium that occurs in one market is corrected by the other market in long run.

Table 2: AVECM results of Soybean Futures and Spot prices

Dependent variable		Coefficient	Standard Error	t-statistic	Probability	Inference
A) Futures	C(1)	-0.072963	0.027383	-2.664539	0.0078	S↔F

Dependent variable		Coefficient	Standard Error	t-statistic	Probability	Inference
B) Spot	C(1)	-0.053877	0.017080	-3.154378	0.0016	

Source: Author's Estimation.

Table2: BVECM results of Maize Futures and Spot prices

Dependent variable		Coefficient	Standard Error	t-statistic	Probability	Inference
A) Futures	C(1)	-0.016605	0.0061	-2.722103	0.0066	S↔F
B) Spot	C(1)	-0.009511	0.003752	-2.535085	0.0113	

Source: Author's Estimation.

4. Granger Causality Test:

This test examines the lag-lead relationship between the variables at 0.05 level of significance using F-test. It is a statistical proposition test for determining whether one time series is helpful in forecasting another one.From table.3A and 3B shows the Granger causality test result of Soybean and Maize. It is observed that that the p-value is less than 0.05 (<5%) in both commodities and the null hypothesis is rejected. Thus, this can be concluded that there is bi-direction of long run causal relation in between Futures to spot for Soybean and Maize.

Table3A: Pair wise Granger Causality Test for Soybean (Sample size: 1410Lag:11)

Null Hypothesis	F-statistics	probability	Inference	Direction of causality
A) Soybean SPOT_PRICE does not Granger Cause FUTURE_PRICE	7.05268	1.E-11	Rejected	F↔S
B) Soybean FUTURE_PRICE does not Granger Cause SPOT_PRICE	3.74406	3.E-05	Rejected	

Source: Author's Estimation.

Table3B Pair wise Granger Causality Test for Maize (Sample size: 1560Lag:8)

Null Hypothesis	F-Statistics	probability	Inference	Direction of causality
A)MAIZE_SPOT does not Granger Cause MAIZE_FUTURES	4.70712	9.E-05	Rejected	F↔S
B) MAIZE_FUTURES does not Granger Cause MAIZE_SPOT	2.77316	0.0110	Rejected	

Source: Author's Estimation.

5. Market Efficiency and Volatility transmission:

The vital objective of this paper is to evaluate the impact of volatility of one price series of the commodity on the volatility of other series. The volatility spillover between Spot and Futures of both commodities can be studied with the help of GARCH (1,1) and EGARCH.

Commodity Futures markets have unique characteristics of good trade volume, adequate liquidity, and low margin requirement. There are a large number of Speculators, Arbitrageurs and traders existing in the market. Hence, the Futures market is expected to be more efficient than spot market.

As soon as new information about the commodity hits the market, the traders counter to the information and try to rearrange or readjust their positions or portfolio accordingly. In such situations, the Futures market reacts quickly to the information due the above mentioned unique characteristics than the Spot market. The volatility in the commodity prices is the greatest worry for the participants in the market.

GARCH model allows the conditional variance to be dependent on previous own lags.

GARCH (1,1) model equation: $\sigma t2 = \alpha 0 + \alpha 1 \mu t\text{-}1 + \beta\, \sigma 2t\text{-}1$

$\sigma t2$ known as conditional variance as this is one t period ahead to estimate the variance calculated based on any past information.$\sigma t2 = \alpha 0 + \alpha 1 \mu t\text{-}1 + \beta\, \sigma 2t\text{-}1 + \beta 2 \epsilon\, t\text{-}1\ 2$

In the above equation one more exogenous variable is added, i.e. the square of the lagged error terms of the other variable, estimated with the help of ARMA forecasting model.

The result of GARCH and EGARCH evaluation is segregated into two parts.

- Part 1: Represents the standard output for the equation of mean.
- Part 2: Represents the variance equation.

In GARCH method, estimate α is known as ARCH term and β is known as GARCH term.

In EGARCH model, estimate ω is the EGARCH model mean, α is the parameters of the ARCH (p)component model, and γ is the leverage parameters.

The leverage constrains measure the irregularity or influence effect. The leverage constrains are of utmost significance, because on the basis of this the EGARCH model permits for assessment of asymmetries. In EGARCH model, beta is the parameters of GARCH (q) component model which correspond to the symmetric consequence of the model. This is called GARCH effect.

If the value of $\gamma = 0$, then we assume that it is symmetric.

If the value of $\gamma < 0$, it means positive shocks process a lesser amount of unpredictability rather than negative shocks. It means good news generates less volatility than bad news.

If the $\gamma > 0$, it means that positive shocks are more volatile in comparison to negative shocks.

Market efficiency and Volatility Spillover of Soybean:

Table 4A: GARCH and EGARCH estimates of Soybean

Variable	Coefficient	Standard Error	Z- Statistic	Probability
Soybean GARCH estimate:Dec.2012 to Dec. 2018				
Mean Equation	3554.656	3.806064	933.9455	0.0000
Variance Equation:				
α	1086.988	347.4846	3.128163	0.0018
β	0.968400	0.159940	6.054769	0.0000
Soybean EGARCH Estimate: Dec. 2012 to Dec. 2018				
Mean Equation	3581.153	2.492388	1436.836	0.0000
Variance equation:				
ω	-0.357174	0.224078	-1.593974	0.1109
α	1.166561	0.147698	7.898275	0.0000
γ	0.001463	0.080628	0.018150	0.9855
β	0.931948	0.020757	44.89898	0.0000

Source: Author's Estimation.

Market efficiency and Volatility Spillover of Maize:

Table 4 B GARCH and EGARCH estimates of Maizefrom December 2012 to December 2018

Variable	Coefficient	Standard Error	Z- Statistic	Probability
Maize GARCH estimate: Dec.2012 to Dec. 2018				
Mean Equation	1264.751	0.929041	1361.351	0.0000
Variance Equation:				
α	152.1694	23.96768	6.348941	0.0000
β	0.029588	0.025906	1.142115	0.2534
Maize EGARCH Estimate: Dec.2012 to Dec. 2018				
Mean Equation	1265.531	0.582988	2170.768	0.0000
Variance Equation				
ω	-0.259564	0.213689	-1.214683	0.2245

Variable	Coefficient	Standard Error	Z- Statistic	Probability
α	1.700201	0.122693	13.85736	0.0000
γ	0.098465	0.102896	0.956941	0.3386
β	0.847226	0.032899	25.75216	0.0000

Source: Author's Estimation.

GARCH: In GARCH estimate of Maize, the parameters of ARCH (α) and GARCH (β) are positive and are significant as the p-value is below 5%. It means that previous days information of futures price can influence the volatility of spot price.

In GARCH estimate of soybean, the parameters of ARCH (α) and GARCH (β) are positive. The ARCH parameter is significant, but the GARCH parameter is not significant because the p-value is above 5%, which means that previous day's information of futures prices cannot influence the volatility of spot price.

EGARCH: In each case of EGARCH model, if the sum of values of α, β and γ parameters is larger than 1 in the EGARCH model, suggest an explosive ARCH process. If parameters α andβ are positive and also significant, which implies the presence of ARCH effect and GARCH effect in the returns.

In both cases of soybean and Maize, the p-value is less than 0.05 forα and β parameters and the coefficients of α and β parameters are significant in the EGARCH (1, 1) at 95% confidence level.

If the p-value is less than 0.05, then, we discard the null supposition that there is no GARCH and EGARCH effect. Thus, we agree the alternative suppositions that exists an effect at 95% level confidence. Additionally, the constraint for the asymmetric volatility reaction (γ) is positive for both commodities and is not significant as the p-value is greater than 5%.

3. CONCLUSION

The empirical test examined the efficiency of commodity market in India and unpredictability of spillover effect in the spot and futures market with regard to two commodities soybean and Maize, which are highly traded in NCDEX during 2012-2018. The Spot and Futures prices of the commodities are found to have long term relationship, which is supported by the existence of an error correction mechanism called Arbitrage. Further, the error correction mechanism responsible for restoration of the equilibrium connection between where some disequilibrium takes place between spot and futures markets. These arbitrage occasions can be theoretically explained as difference between the estimated prices under deterministic model and actual prices in the market. However, this arbitrage occasions help in correcting the disequilibrium between the spot and futures prices of the commodities in the market.

The forecasting error in spot prices of both the commodities is observed to be explained by the variations in the lagged values of futures series. Whereas forecasting error in futures prices is mainly explained by the variations in its own lagged values.

The futures prices series of commodities are exogenous in nature, while the spot prices are influenced by the lagged behaviors of futures prices.The significant and higher response of the spot prices to the shocks in futures prices is observed in the both commodities.

Futures markets have exclusive characteristics of good liquidity, low margin requirement, large number of participants and high-volume trade. Thus, it is convenient for trader rebalancing their position according to the news that affects the markets. Thus, futures markets are very responsive/ sensitive to the news than that of spot market. Volatility of futures prices effects the volatility of spot prices volatility. However, effect of past volatility in spot market prices on the futures prices are seen in the results. Thus, this can be termed as cascading effect for the reason of co-movement of the series.

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Distributed Query Processing in Distributed Database System

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ABSTRACT

A distributed database System is a group of many, logically interrelated databases, spread over a computer network. Query processing is the procedure of answering queries in distributed environment where data is managed at multiple sites in a computer network. The main difficulty is to select the execution strategy that minimizes resource consumption. In this paper we will study the query processing with the help of examples. We will process the query with the help of Simple Join and Semi Join techniques and also find out the good strategy for query processing in Distributed Database System.

Keywords: Distributed Database, Query Processing, Simple Join, Semi Join, Projection, Relation, Computer Network.

1. INTRODUCTION

Distributed database plays a vital role in todayera where information dependency is more and all kinds of persons need access to companies' databases or institution's databases [1]. Query processing comprisesconversion of high level queries into low level expressions that can be used at the physical level of the file system, query optimization and actual execution of the query to get the result [2].Query processing deals with designing algorithms that analyse queries and convert them into a series of data manipulation operations. The problem is how to choose on a strategy for executing each query over the network in the most cost-effective way, though cost is defined [3]. The issues to be measured are the distribution of data, communication costs, and lack of adequate locally obtainable information [4].

Query processing links to many database research areas, including query optimization, indexing methods, and query languages etc. [5].

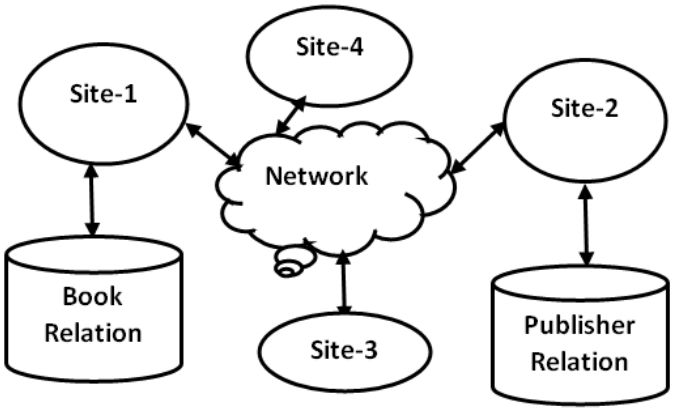


Fig. 1.0: Distributed Database System

2. PROBLEM IN QUERY PROCESSING

The low level query essentially implements the execution strategy for the query. The transformation must attain both precision and effectiveness.It is correct if the low level query has the same semantics as the original query that is if both query yield the same result. The well define mapping from relational calculus to relational algebra makes the accuracy issue easy.

3. QUERY PROCESSING

In query processing there are two factors involved.

- Communication cost
- Performance

4. METHOD

4.1 SIMPLE JOIN PROCESSING

Join is one of the most expensive operations.

Example

Relation - Publisher

ISBN	Price	P_Name	P_ID

Relation - Book

ISBN	Book_ID	Author_Name	P_ID

π ISBN, Price, P_Name, P_ID (Book ⋈ Publisher) (Book.P_ID=Publisher.P_ID)

In a book relation has 500 tuples each tuple is 100 bytes long.

Total size of Book reference = 500 X 100 = 50000 bytes

Publishes relation has 100 tuples and the size of each tuple is 150 bytes' long

Total size of publisher relation 150 X 100 = 15000 bytes

The size of ISBN=15, Price=6, P_Name=50, P_ID=4. Each tuple is 75 bytes.

After join 500 tuples and each tuple is 75 bytes. Size of output 500 X 75 = 37500 bytes

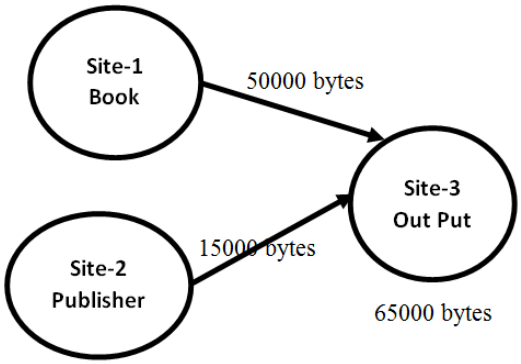
Book relation present atSite-1

Publisher relation present atSite-2

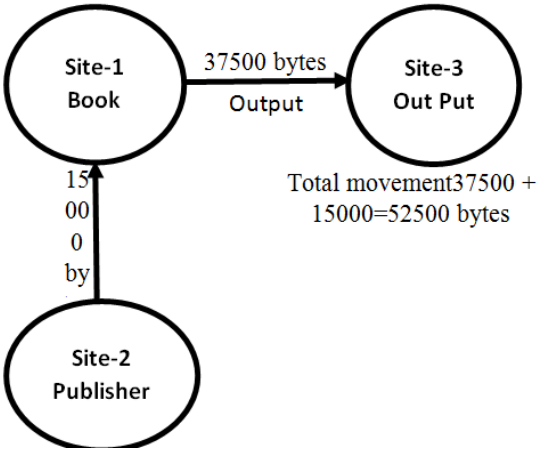
Output display at Site-3

STRATEGIES– Solution –
There are the following strategies:

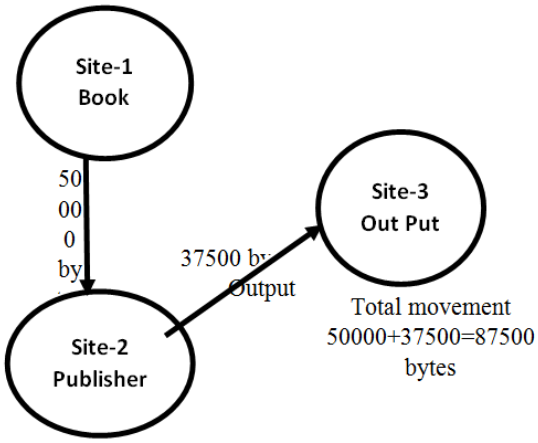
Transfer replicas of both relations Book and Publisher to site3 and process the query.



Transfer replica of (Publisher relation) to Site-1 for processing then move the result to Site-3



Transfer replica of Book relation to Site-2 for processing and then send result to Site-3



Since the cost of strategy 2 is low in comparison to strategies 1 and 3. Hence strategy 2 will be better for query processing.

4.2 SEMI JOIN

It is used to reduce the communication cost in performing a join operation. Main idea is to reduce the size of a relation that needs to be transmitted and hence the communication cost.

Example

π ISBN, Price, P_Name, P_ID (Book ⋈ Publisher) (Book.P_ID=Publisher.P_ID)

The size of ISBN=15, Price=6, P_Name=50, P_ID=4. Each tuple is 75 bytes.

Book relation site-1, Total tuple = 500

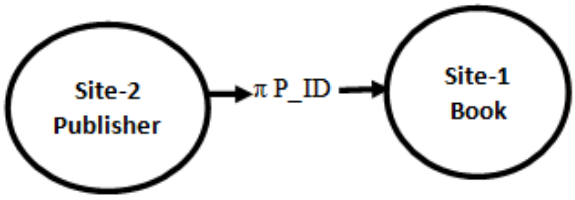
Publisher relation site-2, total tuple = 100

Output at site-2 only

In this join operation we move only that attribute which is required instead of relation in query processing

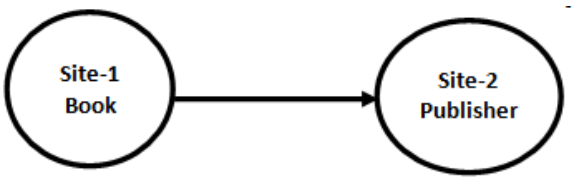
STRATEGIES – Solution
There are the following strategies:

Project the join attribute (P_ID) of publisher at site-2 and move it to Site-1



100 X 4 = 400 bytes

Join the transferred attribute to book relation and transfer required attributes from result to Site-2



500 X 25 bytes 12500 bytes

Evaluate the expression by joining transferred attributes with publisher result ate Site-2

400 + 12500 = 12900 bytes

5. CONCLUSION AND FUTURE SCOPE

It is found that the main problem is how to choose on a strategy for executing each query over the network in the most cost-effective way. In simple join method it is found that the Since the cost of strategy 2 is low in comparison to strategies 1 and 3. Hence strategy 2 will be better for query processing. The total cost of strategy 2 is 52500 bytes.

Further the cost of above query is also reduced by semi join method. It is found that the we optimise the query processing with the help of semi join method.

The limitation of this paper is thatI have studied only Simple join and semi join method of query processing and chooses the best strategy for query processing over distributed database system. In future we may work on query optimization techniques.

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Adoption of Electronic Media in Agricultural Activities Enhance Productivity in India

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ABSTRACT

Increased demand for farm productions and the use of natural resources compelled the agriculture community to enhance the use of Information and Communication Technology (ICT) in various farming processes. A Decision Support System (DSS) in agriculture proved useful in this regard as the agricultural systems are complex and partially known. The majority of available agricultural decision support system is either specific to crop or task-specific. The rapid growth of electronic media and the introduction of mobile-enabled information services provide different ways to improve information dissemination in the agriculture sector and also help to overcome information asymmetry existing among the group of farmers. It assists with crossing over any barrier between the accessibility and conveyance of agricultural information sources and farming practices. As electronic media continues to grow among farming communities and societies, there is a need for adaptation and dissemination to have a much greater rural productivity impact in the future.To use the full potential of scattered information by electronic media with supporting infrastructure and capacity building among farmers it is necessary to guarantee the quality of information, its practicality, and dependability.

Keywords: Agriculture, Technology, Electronic Media.

1. INTRODUCTION

India is an agricultural country. Agriculture and its ailed activities act as a main source of livelihood for more than 80% of the population of rural India. It employs approximately 52% of labor. Its contribution to GDP is between 14-15%. India has 120 million farmers out of which 30 million uses smartphones and has a basic sense of understanding about the electronic marketplace [1]. Electronic media is being used in agriculture to improve results with a minimal environmental cost.

The decision support systems mainly use to develop a rule-based or knowledge transfer based approach. These methodologies can support the development of large knowledgebase information. For large and inclusive decision support system modelling approaches are more suitable than transfer approaches. Unfortunately, it seems that model-based knowledge engineering is not much utilized for the development of Agriculture DSS. The paper presents the organizational structure, farmer communities, tasks, communication channel, knowledge, and design models based on the minimum model approach for the development of scalable, broad and practically usable agricultural decision support systems. The use of the electronic information system helps in decision support for irrigation scheduling and weather-based disease forecasting for the important crops of India. The proposed model along with the required expert knowledge providesa platform on which the larger DSS can build for any crop of given locations.

To modernize Indian Agriculture the Indian government has coordinated endeavours like:

- PradhanMantriFasalBimaYojana
- PradhanMantriKisaanMaan-DhanYojana
- Prime Minister KrishiSinchayeeYojana
- National Centre for Cold-Chain Development
- Direct Benefit Transfer (DBT) Portal for Agriculture Schemes
- E-Farm Machinery Online

According to the various report, facilities mentioned above have not reached many farmers and still require the attention of policymakers. Electronic media can be used to fill the existing gap. Impact of electronic media on agriculture will benefit in several ways:

- Electronic media provides more efficient ways to produce, harvest and sell essential crops.
- Technology implementation emphasis on checking defective crops and improving the potential for healthy crop production.
- The growth in Agriculture technology has strengthened agro-based businesses to run more efficiently.
- Information technology is being used in applications such as automated machine adjustments for weather forecasting and disease or pest identification.
- The use of electronic media in agriculture can improve crop management practices thus, helping many tech businesses invest in algorithms that are becoming useful in agriculture.

Classification of new computerized applications is presently accelerating mediations that have been appeared to improve efficiency and development in this segment. Though a huge amount of electronic information is available for helping the farmers unfortunately very limited applications are available which can use this available information and suggest the latest best practices for the farmer.

Hence there is a need for IT-based platforms that can

make the farmers aware of the latest good agricultural practices like orchard site preparation, fumigation, soil management, cover crop, taken care of tree density, etc. Use of technology in agriculture is rapidly rectifying the problems while recommending specific action that is required to overcome the problem.

There are lots of works done for the betterment of farmer's and there are various studies suggested good practices for farmers. There aredifferent online and offline tool or mobile apps which are specifically made to provide the financial enhancement of the farmer's communities. As in a general article by P. Krishna Reddy a framework is designed for agriculture information to improve crop productivity. It is a serious concern that after huge information available online and works for farmers and theiradvancement; there is a loophole that resists the improvement of farmers. B.L Dhaka stated in a research paper that the effect of farmers' experience with ICTs on the transfer of technology in changing the agri-rural environment is based on statistical and mathematical knowledge of farming. It is beyond the use of local farmers. So the study by which the electronic market place helps the rural farmers in India will take place.

2. METHODOLOGY

Population: The population of this study comprised of those farmers' communities who were directly or indirectly involved in agriculture activities living in India. Due to the dominance of farmers having smartphones and electronic media and using it in taking decisions related to agricultural activities, it was decided to include only farmer's communities and related agencies in the population of the study.

Sample: Multistage sampling technique was employed to select participants of the study. At the first stage, few villages like Gopramau, Sarsanda, KasmandiKalan, and Naubastfrom tehsils like Malihabad and BakshikatalabfromLucknow district of Uttar Pradesh were selected through random sampling were Mango is the major crop. Furthermore, the farmer's society and communitieswereselectedconveniently by keeping in mind the accessibility and convenience of the researcher to collect data. At the final stage, 120 farmers from these four villages were approached using a convenient sampling technique. Those farmers were chosen by the criteria of their involvement in agricultural activities.

Instrumentation: The data were collected by using a questionnaire developed to gather information from farmers.Thedata is collected by the interview schedule which was developed by the help of literature. There were some defensible terms found through pilot study and modifications were recommended by the panel of experts. These improvements were incorporated into the questionnaire and the interview. The data were collected by using Hindi and English languages.

Data analysis: The data were analysed employing descriptive and inferential statistics using SPSS. The frequency and percentage of categories were presented in tabular form.

3. RESULT AND DISCUSSION

The demographic information describe that all the respondents were farmers, most (50%) and above of them had more than primary education,most of them had access to electronic media and likewise, most ofthe respondents (48%) had medium-size farmlands with income level up to 50 thousand. The absence of higher educational qualifications is a striking elementamong the respondents.

Most of the respondents had access to T.V, radio, and smartphones but when asked about farmersa preferred source of information most considered newspapers, brochures, and posters aremore effective and frequently used information sources. In this respect, the respondents were probed about their preference of 'other media' over smartphone and TV. It was revealed that the preferred sources of agriculture information were distributed at theirdoorsteps by smartphones. It is been observed that farmers are more curious about the protection of crops as shown in figure and table 4. Farmers also seek information in their local language.

Table 1: Demographical Information of Farmers including Their Educational Level, Farm Size and Their Income Level

Variables	Frequency	Percentage
Educational Level		
Primary	47	39.16
Junior high school	55	45.83
High School and above	18	15.00
Ownership		
Personal farming land	36	30.00
Tenant land	29	24.16

Variables	Frequency	Percentage
Family property	49	40.83
Other	06	05.00
Farm Size		
Small	46	38.33
Medium	58	48.33
Large	16	13.33
Income level		
Below 50 Thousand	89	74.16
Up to 1 Lakh	26	21.66
More than 1 Lakh	05	4.166

Table 2: Access and preference regarding electronic media sources in getting agriculture information

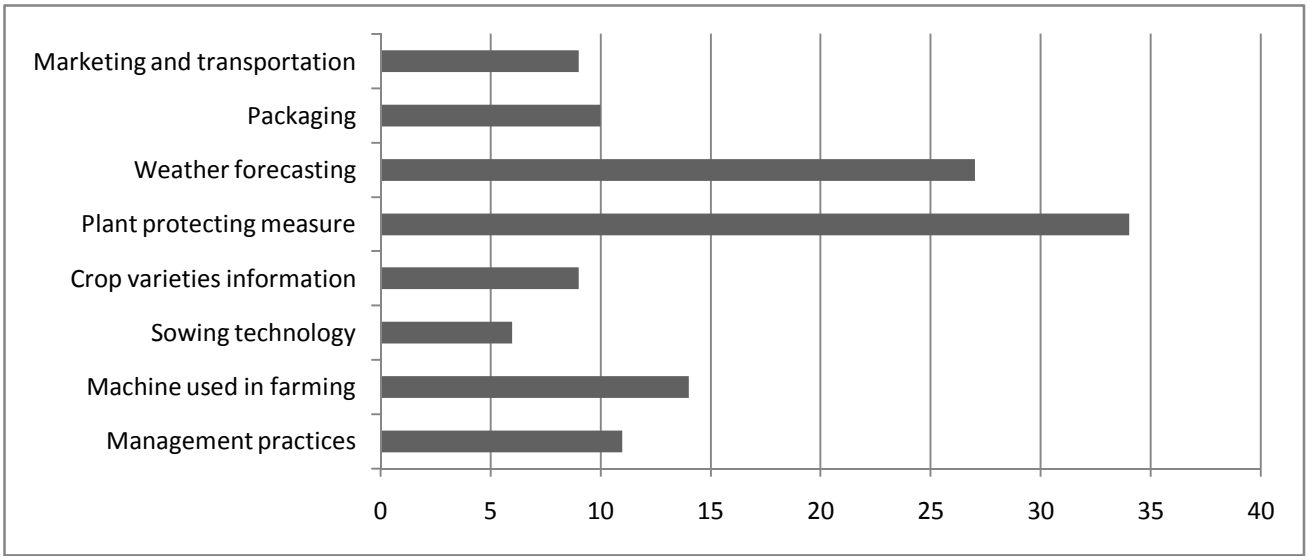
	Television (%)	Radio (%)	Smartphone (%)	Other (%)
Access to media?	11	9	21	79
	9.16%	7.5%	17.5%	65.83%
The preferred source of agricultural information?	16	9	73	22
	13.33%	7.5%	60.83%	18.33%

Table 3: Language of media for agricultural information

	Hindi	English	Other
Prefer language?	101	05	14
	84.16%	4.16%	11.6%
The information available in?	24	94	02
	20%	78.33%	1.66%

Table 4: Factor affecting agriculture productivity in media devices

Factors	Frequency	Percentage
Management practices	11	09.16
The machine used in farming	14	11.66
Sowing technology	06	05.00
Crop varieties information	09	07.50
Plant protecting measure	34	28.33
Weather forecasting	27	22.50
Packaging	10	08.33
Marketing and transportation	09	07.50



Factors affecting agriculture productivity in media devices

A system by which agricultural activities going on is complex and partly known to farmers. The design of the decision-making system for agricultural activities is quite challenging and involved. Theelectronic approach provides a scalable and modular framework in agricultural practices. A single framework which is multitasking and provides a better decision support system is required in our country that can break down the entire problem and construct a designated knowledge, communication, design, model, task organisation and agents in various section of agriculture. The advantage of the use of electronic media in the agricultural process is time saving and work according to the situation. It can act as an overview of the problem and differentiate the role of elements in the agriculture process. It includes the knowledge elicitation and every minute detail of the process is being used. To remove the complexity level over the head of knowledge providers and users can get the hassle-free solution on the electronic media.

4. CONCLUSION

The development of a web-based Agriculturalelectronic model is presented in a well-known electronicframework. It is always useful to undertake the decision support system problem with a modular approach which helps predict the things. It helps to remove the blockage of knowledge acquisitionthat occurs in the knowledge transfer approach. Typically, in the development of the agricultural practices knowledge framework approach encourage the reuse of knowledge. At present, the agricultural techniques are mainly either crop-specific or task-specific. These limitations of the farmer's community require some rules and technology transfer approaches. More and more use of electronic media based approach in the development of agricultural activities enhances the development in a more generalized way of the comprehensive pattern. It has an edge over the traditional knowledge transfer approach in terms of modularity and scalability.

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Dial Kirkpatrick for Training Evaluation: A Feasible Model

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ABSTRACT

A report by Statisca has estimated on global workplace training industry size as 370.3 billion U.S. dollars in 2019 posting year-on-year growth vis-à-vis 366.2 billion U.S.dollars in 2018. Having spent thus far, around the globe, it is meaningful to query whether the training has resulted in optimum output as envisaged by the organizations. However it will be surprising if the organizations fail to evaluate the learning intervention, after spending considerably. The article gives a snapshot about the widely prevalent model of training which is acclaimed around the globe that quotes in simple terms about evaluation parameters. The model referred in this article has increasing gradation in the process of training evaluation which increases in complexity level as one moves on from one stage to another. An organization can choose on from an evaluation of a particular element or few elements or all elements put together as per plan and requirements of a particular organization. The Article also connotes upon few practical realities that exists in organizations in the realm of training process evaluation.

Keywords: Evaluation, Behavior, Organization, Development, Framework.

1. INTRODUCTION

One of the foremost activities undertaken by the Human Resource (HR) function is to organize necessary capabilities to its employees as per the plan and requirement given by the business. Towards this direction, business entities around the globe expense huge resources in terms of effort, time, money and others considering the significance of the change it envisages for sustainability of the business. In this perspective, the learning and its associated development activity assumes necessary role to take the bull by the horns putting itself in a lead position in the organization for implementation of necessary learning intervention.

Learning contributes to one of the main change management process that is mapped and organized in an organization at regular time interval. Though the consequent learning happens, its associate activity of evaluation is brushed aside comfortably for many avoidable reasons of time constraint, lack of awareness, apathy, inadequate support from manager and non-involvement from the top management. Thus the process of learning cycle becomes deficient for want of completion of training evaluation sub-process in toto. This deficiency portrays a contrasting and conflicting scenario in the training domain of an organization.

2. A FEASIBLE MODEL: KIRKPATRICK'S FRAMEWORK

Donald Kirkpatrick's four level evaluation model remains as the most well-known and recognized model for practice in the industry. Kirkpatrick1(2006) developed his model in the late 1950s and the model has been amended by number of writers and HR professionals. Though the name would not have cut across among many users, the evaluation parameters perforce connote the author's model either directly or through reference. The taxonomy describes four stages that consist of L1 (Level1), L2 (Level2), (L3) Level3 and L4 (Level4).

(L1)-Reaction: The initial level measures how learners react to the training, their satisfaction level and determines gap in the training content. The participants' satisfaction with the program is demonstrated by their immediate reaction about the trainer, method of presentation, usefulness of the subject matter, facilities etc., This level measures how learners feel about the training2. The reaction data won't give immediate insights into Return on Investment(ROI), but this level forms the foundation for future learning programs.

Level 1-Evaluation in Organization: This level is the only evaluation that is widespread among organizations. This is nothing but a customized feedback form filled-in by the participant for submission to the trainer. In practice, these forms are given at the end of the program which is filled up haphazardly and handed over to the trainer as a norm. In addition, the HR department may also give similar feedback document for their records. Normally, the feedback forms are used as a proof of training program to be shown to top management or as evidence to quality assessors.

There are instances, when an employee is nominated for a training program to an external location. Subsequent to program, the training agency hands over the feedback form as a ritual. In few occasions, due to paucity of time, the participant simply puts his/her signature at the appropriate place and hands over the form to the training organizer, informing to fill up the other parts of the feedback. Though this is unpalatable, this is the reality that is happening at many of the training intervention programs. Even if being this a reality, there is not enough

attention given to the inputs received through feedback. The practical incidents of reaction evaluation are shocking and quite surprising. However, there could be few exceptions.

(L2)-Learning: The evaluation at this level measures the knowledge, skill and attitude, the learners have acquired from the training. The participants' gain of new knowledge, skills and attitudes are reflected through changes in their abilities as a result of training. To conduct measurement at this level, a little planning in advance - (i.e.) determining the objectives of the course is essential.

Level 2-Evaluation in Organization: This level of evaluation occurs in an organization in bits and pieces. Normally, this evaluation will not happen for all programs conducted by the organization. For some programs on Safety, the pre and post measurement is conducted. The advantage of this evaluation is that it measures in numbers. However, if the learning is going to be new, there will always be improvement in any area of learning, since the participant is not aware of the subject in advance. Hence there will be improvement in the post assessment.

In reality, the pre-test happens as a ritual with many in-built anomalies. On many occasions, participants enter the learning hall, after completion of pre-test and the program would have started. The late comers undertake pre-test in parallel. The participants would have two options. Either to listen to the trainer who has started the learning exercise or to fill up the pre-test form thus trading off one of the options. This is the veracity of learning evaluation during conduct of many learning programs. The pre and post-test forms are sent to respective departments for their evaluation. Due to stringent operational schedule, the departments take their convenient time for assessment of the forms. The feedback scores are collected and compiled by HR function for meager use in future. If this level of evaluation is performed for majority of programs, then we can infer the evaluation is happening at sensible and purposeful level in the organizations.

(L3)-Behavior: The pen-ultimate level of evaluation measures employees' application of their learning in their workplace. The participants' changed behavior should reflect in their job performance. The assessment at this stage is an extension of L2, where one can determine whether the training has an impact on learners' behavior, attitude and performance at work. The evaluation at this level pertains to the exhibition of work-related behavioral change.

Level 3-Evaluation in Organization: The Behavior assessment at this phase will be beneficial if there is a real need for training. The department needs to ascertain the learning requirement and assign a right person for the training. If there is a real requirement and an appropriate person attends the program, then there will be genuine learning that would take place. In such occasion, the learning will get translated into the workplace for synergistic benefit that would encompass individual, department and ultimately the organization.

Training calendar forms one of the base through which the learning intervention occurs in many organizations. For a particular learning program, if the identified employee is not available, then the Head of Department (HOD) many nominate some other employee, as he does not want to loose the opportunity. On completion of program, the HOD plans to transmit the knowledge or skill gained to share with the actual nominee. However, the sharing session may not materialize for want of time and operational constraints. In reality, this is the level where the training evaluation practice is actually getting initiated. In tandem, the challenge of training evaluation practice also starts at this point. If this process of behavior evaluation commences, then the other part of subsequent evaluation (i.e.) Results assessment becomes comparatively feasible and affordable.

(L4)-Results: The final phase in Kirkpatrick model encircles around the impact of training and development upon the organization. This level is the most practical way to calculate the ROI of a training as it measures results subsequent to training. At L4, noticeable and visible results of the training such as reduced cost, improved quality, increased productivity, better marketing leads, increased sales and higher morale are measured3. Measuring the learning effect on an organization is apparently a difficult task because of complex structure of measuring components and its interaction with the external environment.

Level 4-Evaluation in Organization: Measuring the results is the ultimate and challenging task an organization faces in reality. The results may be visible, but how to convert the results into monetary value? In the current context, 'This is the million dollar question,' that the organizations are stumbling upon. For instance, in case of safety training program, the result is the application of safety practice in the work assignment. There will be savings in terms of life of an employee, but this translation of result into money value is a constraint and hence this evaluation practice is almost not visible in many organizations.

An unknown complexity and uncertainty of an assessment exists at this level of evaluation. This ultimate evaluation should be in terms of results as planned by an organization. Results may be unique in terms of cost benefit, ROI, exhibition of quality value, practice of safety systems, reduced material turnover, reduced attrition rate, faster delivery of goods, increase in market share etc.. Whatever may be the results expected, this should be feasible, practical and sustainable. The results evaluation in practice may not be same and similar for all learning programs. For some, the results are measurable and for some, it is not feasible. Hence the organizations need to be thoughtful and practical in arriving at this L4 measurement.

3. LITERATURE REVIEW

It has been observed from a literature survey spread over three decades about mention of Kirkpatrick model in their literary works. Few authors who had mentioned about Kirkpatrick's in their works comprise of Foxon, M4 (1989), Cynthia D.Fisher, Lyle F.Schoenfeldt and James B.Shaw5 (1996), David Megginson, Paul Banfield and Jennifer Joy Matthews6 (2001), George F Dreher and Thomas W Doughert7 (2007), David A. DeCenzo and Stephen P.Robbins8 (2010), FildzahIkramina and Aurik Gustomo9 (2014), Juliette Denny10 (2016), and Evie Pham11 (2018). They have used different nomenclature as most widely used model, commonly used framework, most popular method, most well known model, popular approach, widely accepted model, highly regarded model etc., connoting to Kirkpatrick's framework. All these adjectives perforce connote upon the fame and use of Kirkpatrick's four level models.

4. CONCLUSION

In today's economic and technological scenario, employees and organizations run short of resource, especially in the form of paucity of time. Hence in this challenging scenario, a model of evaluation that is simple and practical is the need of the hour. The Kirkpatrick's framework fits in the system complementing the lacuna of time and resource constraint. Since organizations are constantly and continuously affected by change due to current economic and global scenario, a simple model is necessary and the model should be implementable. Thus comes the suitability of Kirkpatrick's framework which is simple and sustainable. There are many models that are in parallel or has come following this four level framework. Many studies have referred about offshoot models of Kirkpatrick's framework. The observations from few authors are:

Tamkin P, Yarnall J, and Kerrin M12 (2002) have observed that many evaluation frameworks as the progeny of Donald Kirkpatrick which have gathered much from the earlier indigenous framework. David Mackey and Sian Livsey13 (2007) have pointed that 'there are many models for evaluation mostly derived from the Kirkpatrick model'. Leslie Allan14 (2018) highlights that the widely practiced framework for ascertaining the efficacy of a learning and development initiative has been given by Donald Kirkpatrick and this has been modified and adapted by number of writers.

Considering the current context of industry and academy, the model evolved by Donald Kirkpatrick can be considered as a profound framework for use in organizations towards assessment of training impact. In the years to come, this robust 4-level framework will predominantly rule the training world at least for another seventy years endorsing the Lindy Effect!

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Agro-Based Industries in India: An Overview

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ABSTRACT

Agro-based industries are the backbone of the government through several schemes as they play a crucial role in boosting the country's economy. These industries consist of the processing, preservation and preparation of agricultural production for intermediate and final consumption. With the corporate sector desirous on investing in agribusiness to accompaniment the emerging opportunities in domestic and global markets, time is opportune for reforms that would provide healthy business environment for this sector. The main objectives is to improve and impressive growth in this industry for the farmers in every sector like increase farmer's income, business opportunities, reforms to boost and many more. These industries are not free from issues and challenges. Government, through various schemes like under Make in India, Start-up India, etc. attempts to ensure robust modern agro- industrial infrastructure. The main challenge here to how the scheme and policy interventions implements in the rural areas without undermining the identity of village, its socio- economic structure, agro-production systems and the basic agro- manufacturing characteristics.

Keywords: Agro-based industry, Farmers, Rural Sector, etc.

1. INTRODUCTION

Agro-Industry consists of the processing, preservation and preparation of agricultural production for intermediate and final consumption. It performs a number of crucial functions that support development and poverty alleviation. So, it is high time that rather than focusing on agriculture production and productivity alone, the policy makers and industry leaders recognize agriculture in connection with industry as a competitive, value- adding business sector that has a positive development impact and significant contribution to economic growth. A comprehensive approach could include supporting small agro-producers and SMEs, enabling market access and developing a supportive institutional environment. **An Omnibus expression-** Agro-based Industry covers a variety of industrial, processing and manufacturing activities based on agricultural raw materials and also those activities and services that come back to agriculture as inputs. Agriculture provides inputs to the industry and industrial outputs are used in agriculture to expand its production and productivity base.Agro-based industries are depending on agriculture for their raw material and other basic inputs. This inter-dependence should be oriented to suit the need of our country and State. Stabilization and growth of agricultural production effects in rapid advancement in output and employment in agro-industries. India's 54.6 percent population is still engaged in agriculture and allied activities. Indian farmers are largely unorganized. They rely on external agencies for disposal of their marketable surplus. Lack of capital asset endowments in rural areas compels them to sell their produce at throwaway prices to the middlemen/commission agents. Low income from the primary farm produce and lack of investment in the processing and agri-value chain has caused rapid reduction in farm profits and the farm occupation has now come under severe pressure.

2. INDUSTRY SCENARIO IN RURAL AND URBAN INDIA

The industrial statistics of organized manufacturing units as reported in the Annual Survey of Industries of Central Statistical Organization indicates that there was less number of factories in rural areas vis-à-vis urban areas in 2017-2018.

Rural-Urban Break-up of industries in India

Sector	Factories	Workers	Total Persons Engaged	Total Output	Net value Added
1	2	3	4	5	6
Rural	98,177	55,55,120	69,82,408	40,34,65,937	6,20,03,250
Urban	1,39,507	66,69,282	86,32,189	40,47,01,178	6,18,09,605
% Rural to Total	41	45	45	50	50
Total	2,37,684	1,22,24,402	1,56,14,598	80,81,67,115	12,38,12,856

Source: Annual Survey of Industries, Central Statistical Organization, 2017-2018 (Provisional)

However, their contributions towards total output and net value addition in the sector were somewhat identical. This shows that establishment of more rural industrial units would go a long way in not only absorbing surplus labor but also contributing largely to the total industrial output and value addition.

3. WHY PROMOTE AGRO-BASED INDUSTRIES?

India has the world's 10th largest arable land, 20 agro-climatic regions and 15 major climates. Census data indicates that the total number of cultivators in the country has decreased from 127.3 million in 2001 to118.8 million in 2011. This may be due to excessive product orientation of Indian agriculture with adequate focus on value addition, wastage reduction and incremental income through agri-processing and manufacturing.

There is opportunity of an overall growth of agricultural economy as only 2 to 3 percent of agri-commodities are processed. Considering the extant depressed price discovery scenario in the Indian agriculture, it is necessary to amply invest in rural areas so as to develop suitable processing and manufacturing infrastructure and to attract private public partnerships for setting up of modern agro-based industries in and around rural areas.

4. POTENTIAL OF AGRO-BASED INDUSTRIES IN INDIA

The fluctuating and decelerating agricultural growth, if not arrested, will have serious consequences for the livelihood of the population that depends on agriculture, particularly manufacturing sector that has strong backward and forward linkages with agriculture. The liberalized food manufacturing sectors, as well as other forms of agribusinesses, could play an important role in stimulating agricultural growth. Amongst various agro-industries, food manufacturing is more material- intensive, and thus possesses a greater potential to revitalize agricultural growth by strengthening forward and backward linkages with farmers, and speed up the process of commercialization and diversification of agricultural production. Further, food processing industries, to reduce their own transaction costs, often tend to be located nearer to the source of raw material, and thus can create income opportunities for the rural people. Hence, accelerating agricultural growth through diversification and development of agro-processing is a major policy challenge.

5. CHALLENGES TO SET UP AGRO-BASED INDUSTRY

Land, Labor and Capital are the basic requirements for setting of up an enterprise. But India ranks at the bottom in all these three parameters. Capital is costliest in India. With rate of interest as high as 12 percent, many industries cannot afford to borrow capital. The congress- led government made land acquisition very difficult and no industry could come up. It is not possible to set up an industry without land. Employment cannot be increased without jobs.

World over including Bangladesh follows a "hire and fire" policy but India does not allowing it. As a result, many textile industries shifted to Vietnam and Bangladesh and not India. Recently, 53 industries shifted out to China, of which, 23 shifted to Vietnam and 12 to Bangladesh and just two came to India. Textile is a season- base industry. In the export market, three factors are important- delivery time, cost competitiveness and quality. To deliver an export order on time, more workers are required. But the companies are hesitant to hire as they cannot fire when there is no work because of the government's inflexible labour laws. It ishigh time to push for more agri-reforms aggressively.

6. THE OBJECTIVES OF THE PAPER ARE

To improve and impressive growth in this industry for the farmers in every sector like increase farmer's income, business opportunities, reforms to boost and many more.

7. FRAME WORK OF AGRO-BASED INDUSTRIES

These industries are those industries which derive their inputs from agriculture. Such industries span across a myriad of sectors which alia include processed food, products of rubber, jute, cotton, textile, paper, tobacco, wood, etc. Ministry of Statistics and Programme Implementation's Annual Survey of Industries (ASI) indicates that there are a number of units in such industries and these employ a fairly large number of people. As per the publication, as much as 43.6 percent of factories are agro-based industries. Almost a similar proportion 42.7 percent of persons engaged is accounted for by agro-based industries. These industries do not account for a very high share of either fixed capital or that of total emoluments. Within these industries, food products, textiles and rubber products account for the largest number of factories. As far as employment is concerned, food products, textiles and wearing apparel are relatively bigger employers.

Principal Characteristics by Major Industry Group in ASI 2017-2018(P)

(Figures in Rs. Lakh & Others in Numbers)

Description	Factories	Fixed Capital	Total Persons Engaged	Total Emoluments
1	*2*	*3*	*4*	*5*
Food Products	37,833	2,11,19,573	17,72,399	34,21,585
Textiles	17,957	1,66,68,852	16,78,561	31,31,708
Rubber Products*	14,193	95,92,433	7,12,872	18,01,918

Description	Factories	Fixed Capital	Total Persons Engaged	Total Emoluments
1	*2*	*3*	*4*	*5*
Wearing Apparel	10,498	28,57,883	11,89,520	20,99,762
Paper and Paper Products	7,109	58,59,566	2,84,057	6,81,274
Tobacco Products	3,591	6,08,951	4,61,335	2,94,121
Leather and Related Products	4,617	11,23,972	3,87,134	6,84,473
Cotton Ginning Clearing and Bailing; Seed Processing for Propagation	3,316	4,73, 207	79,471	1,16,224
Wood and Products of Wood and Cork, except furniture	4,565	6,88,936	98,653	1,63,465
Sub-total	1,03,679 (43.6%)	5,89,93,373 (17.9%)	66,64,002 (42.7%)	1,23,94,530 (29.6%)
All India	2,37,684	32,93,41,000	1,56,14,598	4,18,35,726

(Source: Annual Survey of Industries, 2017-2018, Ministry of Statistics &Programme, Government of India)

8. FUTURE OUTLETS

The agro-industries are getting even more important in view of very impressive growth in high value commodities alongside rising incomes in recent years. It has larger scope for acceleration in future given the thrust on doubling farmer's income. While it would be a welcome move, it also demands for a vibrant and robust response from agro-based food and agro-based non-food industries and other stakeholders involved in the cold chain management. Indian planners and policy makers have always encouraged rural and agri-industrialisation. The inherent advantages of agri-industries are optimal utilization of local agri-resources, mobilization of investment on a large scale, creation of job opportunity, prevention of distress rural-urban migration and reduction of disparity across sectors and regions. These industries have the capability of offering a wide, reliable and sustainable model for promotional/ profitable occupation and activity diversification in villages. These industries are not free from issue and challenges. Government, through various central schemes and under Make in India, Start-up India, etc., attempts to ensure robust modern agri-industrial infrastructure.

Agro-based industries are vital to the growth of the economy. Given that most agro-based industries are in micro, small or medium enterprises and may not have the wherewithal to stand competition from cheaper or subsidized imports, the role of government becomes all the more important. The Government needs to ensure a level playing field to agro-based industries vis-à-vis unfair trade practices adopted by exporters of other countries.

There is need to have a well-planned strategy for an agro-business idea based manufacturing operation. There is huge scope to set up a profitable venture for which there is a comparatively small startup capital to set up such business.

9. CONCLUSION

Agro- based industries conform to the notion of competitive advantage both with and outside the country. They can play the role of a safety value to absorb surplus rural labor and can address the problem of large scale unemployment / disguised employment in rural areas. The real challenge here is how effectively the government implements its schemes and policy interventions to ensure an all-round industrial growth in rural areas without undermining the identity of the village, its socio-economic structure, Agri- production systems, and the basic agri-manufacturing characteristics.

There is a need to have a well-planned strategy for an agro-business idea based manufacturing operation. There is huge scope to set up a profitable venture for which there is a comparatively small startup capital to set up such business. Amongst agro-based industries becomes a key ingredient in the successful utilization of available trade remedies and to protect them from unfair trade practices of exporters of other countries.

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Financial Inclusion: With reference to Digitalization

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ABSTRACT

Digital Transformation is far beyond just moving from traditional banking to a digital world. It is a vital change in how banks learn, interact with and satisfy customers. An efficacious Digital Transformation begins with an understanding of digital customer behavior, preferences, choices, and likes, dislikes, stated as well as unstated needs, aspirations etc... And this transformation leads to the major changes in the banking system, from product-centric to customer-centric view. A study of paper entitled to understand Consumers in the Digital Era sheds, some light on the desires of today's digital consumer. In spite of various current challenges e.g. network , device availability , connectivity , electricity in remote areas , logistics expenses with digital banking and mobility, the need is no longer to "leap-frog" but to "deep-dive" into the future. Financial inclusion play an important role for any economy.FI opens the doors for poor & unbanked people .It enhances the access of people to banking institution. Digital technologies like mobile phones &internet helpstomake the developing economy from cash economy to cashless economy. Presences of digital technologies completely change the banking services from traditional banking to modern banking. Going digital and mobile for a bank is no longer an option, it's a simple bare necessity - to collaborate and flourish. All these and rest are taking India to the threshold of the big league and to make the country battle-ready to compete with the most influential industrial and financial powers of global businesses. We can't create a digital vision if you don't have leaders who understand digital. Digital India has leaders & the goal is to make banking cheaper, more efficient and easier to access for all of the country's citizens.

Keywords: Digital banking, Cashless economy, Way forward.

1. INTRODUCTION

Financial inclusion is internationally treated as an evaluative indicator of development, growth and prosperityof society. Inclusive financial development is today's basic need. For effective financial inclusion,there is an immense requirementof digital literacy and digital infrastructure in urbanand rural India. Probable economic & social outcomes of financial inclusion in developing countries are large, yet many problems remain on the pathway of a fully banked world. According to report of world Bank the unbanked population at present stands at 1.7 billion. Finland and Denmark are the two states whose hundred percentpopulations are covered in the banking system. Today, developing economies are suffering from acute shortage of absolute low incomes so there is huge need of financial inclusion in developing worlds.

As perPWC, 2020 report social media will be the primary medium to connect, engage, inform and understand the customers or to deal with the masses "Social mind". It is a place where customers can search and compare their banks offering. Our government wants to connect all the citizens in the main streams of economy by the help of financial inclusion. It would help to those who are excluded from the benefits of financial services provided bythe financial system of country without any discrimination. Digital infrastructure would enable us to achieve the objective of universal financial access 2020.To promote the concept of financial inclusion, Government of India launched the scheme PradhanmantriJanDhanYojana with slogan "MerakhataMeraBhagyaVidhata". Nowpoor section of society can get benefitted with this scheme by getting Loans, Debit card, Insurance cover as well as thebank account also.

Need of computerization was felt by the Indian banking sector in late 1980s, in order to improve the customer service, book-keeping and MIS reporting, Reserve Bank of India set up a Committee on computerization in banks headed by Dr. C. Rangarajan in1988.

Initially banks started using Information Technology with the introduction of standalone PCs and then migrated to Local Area Network (LAN) connectivity. Currently banks adopted the Core Banking platform thus branch banking changed to bank banking. Core Banking Solution (CBS) increases the comfort feature for the customers as a promising step towards enhancing customer convenience anytime and anywhere. Different Core banking platforms such as Finacle designed by Infosys, Banc's by TCS, FLEXCUBE by i-flex, gained popularity.

The Buzzword in India today is creating a cashless future. Buoyed by the successful acceptance of demonetization, the Government of India (GoI) is now pushing digital transactions. The GoI has set a target of 25 billion digital transactions in the next financial year (FY18) through multiple facilities, including platforms such as Aadhar Pay, Unified Payment Interface (UPI), Immediate Payment Service (IMPS) and debit cards. GoI has also launched a mobile application (Bharat Interface for Money - BHIM) for facilitating e-payments through bank accounts. The payments industry is thus seeing alot of action from various fintech players to leverage on GoI's digital push.

Fundamentals of Digital Financial Inclusion:

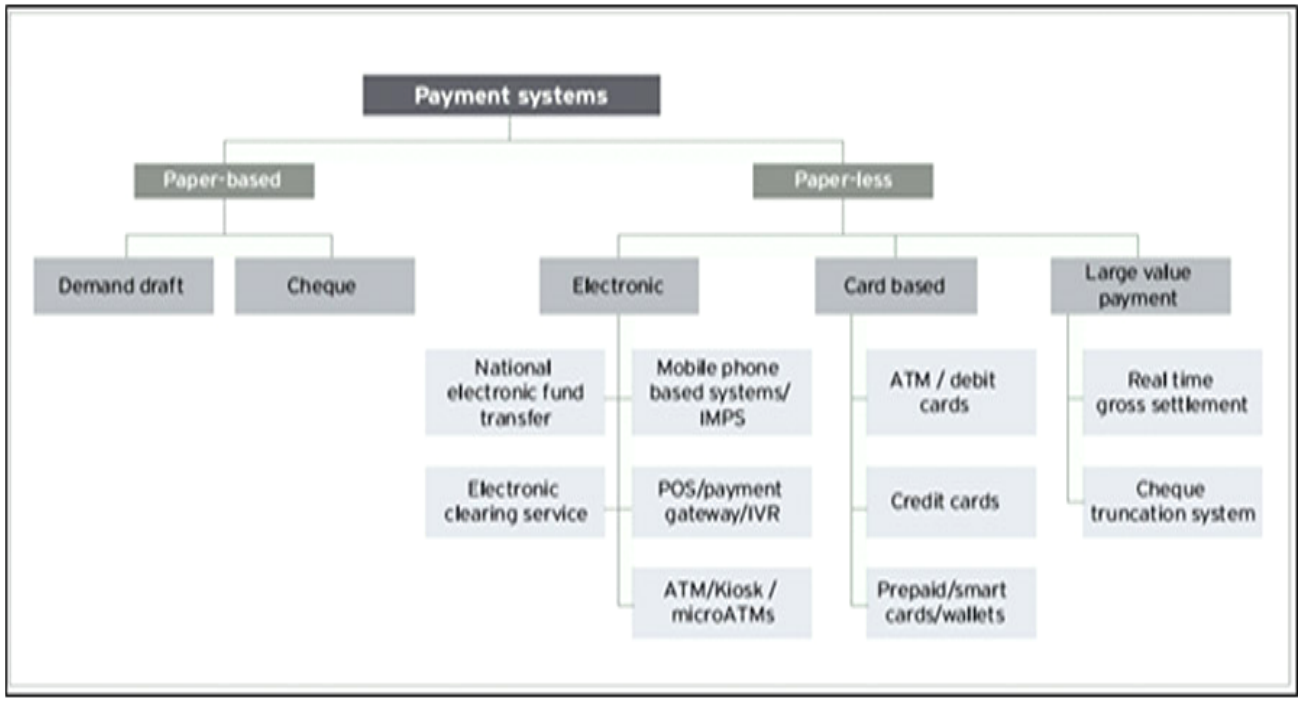
- Retail Agents.

- Digital Transactional platform.
- Additional Financial services.
- Devices.

2. CURRENT STATUS IN THE DIGITAL SPACE

Indian Government is aggressively promoting digital transactions. The launch of United Payments Interface (UPI) and Bharat Interface for Money (BHIM) by National Payments Corporation of India (NPCI) are significant steps for innovation in the Payment Systems domain. UPI is a mobile interface where people can make instant funds transfer between accounts in different banks on the basis of virtual address without mentioning the bank account.

Today banks aim to provide fast, accurate and quality banking experience to their customers. Today, the topmost agenda for all the banks in India is digitization.



3. LITERATURE REVIEW

ShofawatiAtina(2019) As per this paper digital finance is very important for the growth of financial inclusion. Financial inclusion reduces the rate of poverty. Digital finance increases the growth of SME in Indonesia. Most of SMEs are not bankable at there. Digitalization made the situation of easy availability of finances.

SimpliceA.Asongu, Nicholas M Odhiambo (2017): A study that enquire into the relationship between mobile banking & inclusive development that includes quality of growth, in equality and poverty. The conclusion that can be drawn out is that digital banking application will play a supreme role in responding to the problems of deficient growth of the developing countries.

Nidhi Singh, NeenaSinha (2016): This study is concerned with digital banking which states that the banking sector has to create more consciousness to the customers regarding the banking services provided by the banks. This study also reflects the alteration of traditional method of transaction used by the customers by adding digital banking services.

Rakesh H M &Ramya T J (2014) in their research paper titled "A Study on Factors Influencing Consumer Adoption of Internet Banking in India" tried to examine the factors that influence internet banking adoption. It is found that internet banking is influenced by its perceived reliability, Perceived ease of use and Perceived usefulness. In the process of internet banking services expert should emphasize the benefits its adoption provides and awareness can also be improved to attract consumers" attention to internet banking services.

4. OBJECTIVE OF STUDY

- To study the ratio of digital payment per capita in India.
- To analyze the contribution of digital payments as a share of GDP in India.
- To analyze the value & volume of digital payment.

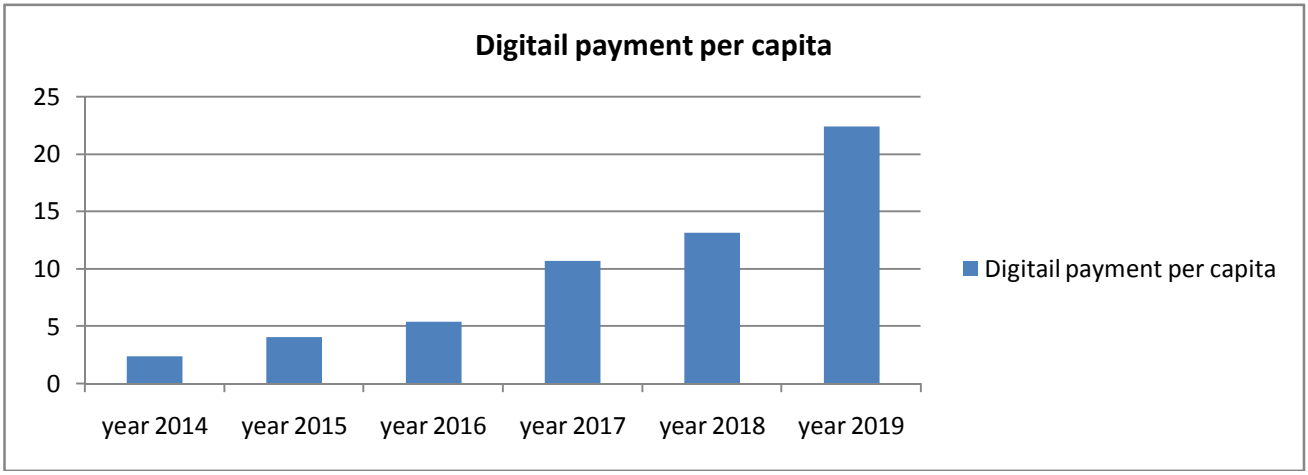
5. RESEARCH METHODOLOGY

Thisresearch paper is based on secondary data. We have collected data from RBI website, magazines, Research papers, Research Articles, Articles published in newspaper. The study is using exploratory and descriptive research.

6. DATA ANALYSIS AND INTERPRETATION

Table: 1: No. of digital payments per capita acrossIndia

Year	Digital Payments
2014	2.38
2015	4.06
2016	5.44
2017	10.73
2018	13.15
2019	22.42



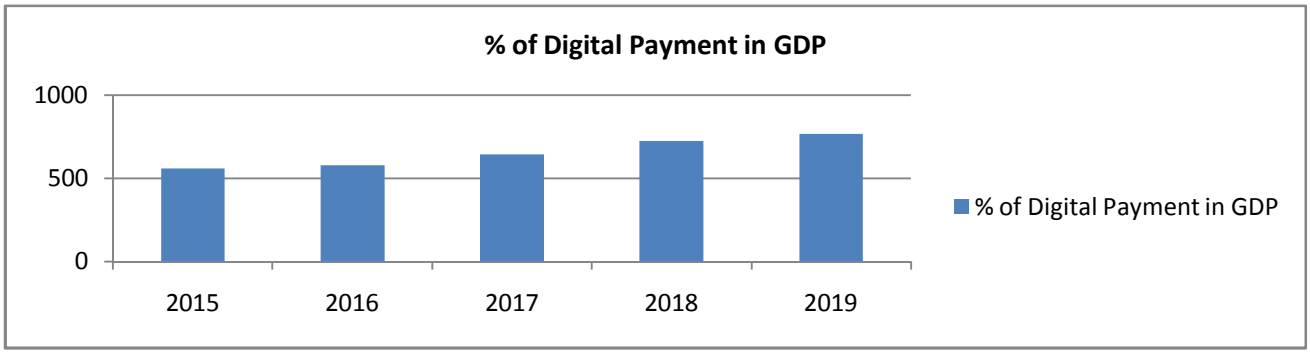
Graph 1

According to 2014 data the digital payment per capita was around 2.38 which was continuously increasing year by year due to demonetization in 2016 it was consistently rising and reaches to 5.44. In year 2019 the digital payments per capita was 22.42 which was very high from 2014 to 2019.

Table 2: Digital Payment as a share of GDP in India from financial year 2015-19

Year	% of Digital Payment in GDP
2015	561%
2016	579%
2017	644%
2018	726%
2019	769%

Graph 2



Tradionally the contribution of digital payment to GDP was low in previous years .Introduction of various cashless payment instrument boost the digital finances and services which converts the informal economy into formal economy

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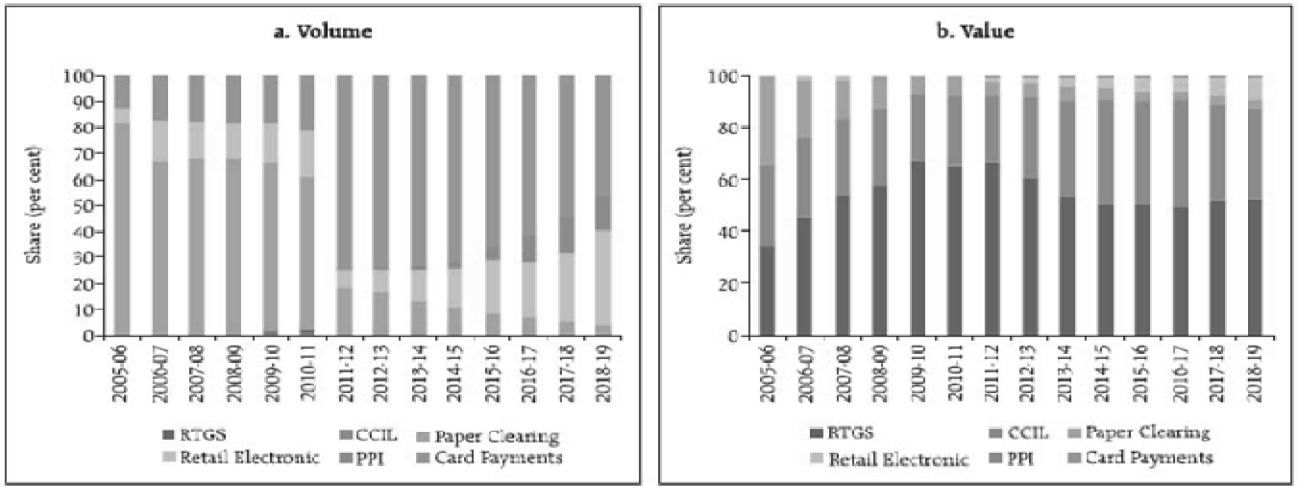
especially after the demonetization and also enhances the digital payment in GDP as per the graph 2.

Graph: 3: The Volume and Value of Digital Payment



The proportion of card payment volume wise initially low but from 2012 to 2019 it wascontinuously increasing. The scope of Real Time Gross Settlement (RTGS) is steadily maintaining its position and overall the use of paper clearing by value is reducing at later year.

7. SUGGESTIONS

Following measures are to be suggested for the future-

- We should go for digitalization because it makes daily receipts and payments much easierthan manual system.
- People should be aware with the benefits of digitalization.
- Campaigns, workshops etc. should be initiates by government (central government and state government).
- Government should laid emphasis on the rural areas because major part lie in rural areas.
- Unless we do not go for digitalization, we cannot achieve the target of world best economy.

8. CONCLUSION

The study explains that the digital finance induces the rate of financial inclusion which will be benefited the whole economy. Availability of efficient digital services signifies by the growth of economic system. The usage of digitalization promotes the digital finances by which everyone can access the financial service like RTGS, CCIL, card payment, Insurance etc.

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Socio-Economic Livelihood Analysis of Uttar Pradesh

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ABSTRACT

The paper argues that socio-economic livelihood analysis of the state of Uttar Pradesh indicates that Uttar Pradesh is primarily an agrarian economy with more than 60 per cent of the population depending on agriculture for their livelihood.The economic stagnation in Uttar Pradesh is manifested in terms of infrastructural bottlenecks, fiscal imbalances and unfavorable social sector parameters.Uttar Pradesh stands at first position at all India level in terms of food grain production. Reliance on intermittent, casual wage employment, lack of literacy, chronic indebtedness, lack of social networks are some indicators of extent of poverty in the state. There are several indicators to show the extent of widespread poverty and gender discrimination within the state of Uttar Pradesh, too.

Keywords: Socio-Economic Indicators; Uttar Pradesh; Poverty; Agrarian Economy; Girl Child.

1. INTRODUCTION

Socio-economic indicators are data or combination of data collected and processed for a clearly defined analytical or policy purpose. That purpose should be explicitly specified and taken into account when interpreting the value of an indicator. Poverty indicator should provide practical and cost-effective means for the evaluation of the state and the development and the effects that policy changes have on those systems.

The importance attached to socio-economic information on the livelihood has greatly increased for several years. Most bodies ask themselves what information they should be collecting in order to establish indicators which are representative of the various sectors.

Indicators are not an end in themselves. They are a tool to help make clear assessments of and comparisons through time. They describe in simple terms the extent to which the objectives set for sustainable development are being achieved. The main purpose in developing a set of sustainability indicators is to assist in assessing the performance of various policies and management and to stimulate action to better pursue sustainability objectives. Here we will discuss the meanings around development and what it spells for the state of Uttar Pradesh.

2. LITERATURE REVIEW

Development is a multi-dimensional phenomenon. Some of its major dimensions include: the level of economic growth, level of education, level of health services, degree of modernization, status of women, level of nutrition, quality of housing, distribution of goods and services, and access to communication (Das, 1999). Since independence in 1947 India has made enormous strides towards the progress of the nation. The concerted and coordinated efforts of the national governments through various Five Year Plans, starting from 1951, have changed the economic scenario of the country considerably. There are many areas of economic development and social development in which India's achievements have been creditable. However, overall successes in reducing poverty, ignorance and inequality have been quite limited. Various factors such as the level of literacy, female education, nutritional standards, infant mortality, morbidity, employment, income distribution, public distribution system, political commitments, etc. and their corresponding interactions, contribute to these striking variations among states in the livelihood of common people.

The selected variables for level of economic development are as follows: GDP per capita at constant price; per capita consumption expenditure for 30 days; percentage of people above poverty line; and employment rate. Of the many choices available for economic production, state-level GDP per capita is the most widely accepted and commonly available indicator. One important aspect of economic health of the people in the nation is the capacity of their expenditures towards consumable goods to the extent possible. It is perceived that the foremost priority in eradication of poverty is to meet the common basic needs of the people. Rao says:

Poverty has to be identified with deficiency in total level of living. And total level of living includes not only energy requirements but also balanced diet needed for health, and the other components of basic needs essential for human existence at a tolerable level (Rao, 1977).

Another important indicator is the employment rate. It is an indicator of the ability of the economy to create and cater jobs. This particular variable serves as a crucial link between social and demographic determinants. According to a study, in respect of economic criteria, 9 major states were below average level. Andhra Pradesh was approaching the average. Bihar was the poorest of all, preceded by Orissa, Madhya Pradesh and Uttar Pradesh. BIMARU is the acronym given for the states Bihar (BI), Madhya Pradesh (MA), Rajasthan (R) and Uttar Pradesh (U). The states in India are marked with wide disparity in socio-economic development. Some states are better-off in terms of economic development, while states like

Kerala,and Tamil Nadu have recorded remarkable social progress.

This leads us to identifying the key research questions for the study.

3. RESEARCH QUESTIONS

The research questions for the study are:

- What are the social and economic livelihood problems in Uttar Pradesh?
- What is the extent of poverty in rural Uttar Pradesh?
- What are the social dynamics that hinder development?

Most of these research questions will be answered in the study.

4. METHODOLOGY

The secondary sources have been studied to evaluate and assess the socio-economic levels of and indicators that exist in various districts of Uttar Pradesh.

5. FINDINGS AND DISCUSSION

Uttar Pradesh, the most populous state of India is well-known for its multi-hued culture, religion and variety of geographical land. It is endowed with natural wealth in abundance such as minerals, forests, flora and fauna. The state has to its credit the magnificent architectures and known for its rich arts and crafts. It is located in the northern part of India and is surrounded by Bihar in the East, Madhya Pradesh in the South, Rajasthan, Delhi, Himachal Pradesh and Haryana in the West and Uttarakhand in the North and Nepal touch its Northern borders.

6. SOCIO-ECONOMIC INDICATORS

Uttar Pradesh is primarily an agrarian economy with more than 60 per cent of the population depends on agriculture for their livelihood. The state is the largest producer of food grain in India and offers a diverse agro climatic condition which is conducive for agricultural production. Uttar Pradesh is known for its highest contribution to nation's sugarcane basket. However, the state offers excellent investment opportunities for industrial development.

The economic stagnation in Uttar Pradesh is manifested in terms of infrastructural bottlenecks, fiscal imbalances and unfavorable social sector parameters. The dismally low level of human development in Uttar Pradesh calls for enhancing human capabilities and competencies. It is worth mentioning that there was a meager improvement in education and health indicators in UP over the years. The value of HDI has also improved from 0.314 in 1991 to 0.388 in 2001, which is indicative of the improvement in health and education indicators in the state. However, the scenario of human development in UP is still quite dismal. Uttar Pradesh occupied the 13thposition in terms of HDI. In fact, gap between the country as a whole and the state on various development indicators was much less in the initial years of planning than what it is today. The state's economy, primarily being agricultural, is undergoing a gradual change with a decline in the share of agriculture and an increase in the share of the services sector. The study discusses the socio-economic structure of the state. The economic structure is analyzed on the basis of the indicators like GSDP, growth of GSDP, and pattern of sectoral shares in NSDP, industrial and infrastructural scenario, poverty and unemployment.

Uttar Pradesh stands at first position at all India level in terms of food grain production. The table below shows the contribution of agriculture and allied sectors with their growth rates, along with the overall contribution of the state economy to Indian economy:

Table 1: Agriculture & Allied Sectors in UP

Plan	Agriculture & Allied Sector, U.P. (per cent)	Overall Economy (U.P.)	Overall Economy (India)
First Plan (1951-56)	1.86	2.12	3.60
Second Plan (1956-61)	1.48	1.75	3.95
Third Plan (1961-66)	(-)0.09	1.58	2.32
Three Annual Plan (1966-69)	0.62	0.32	3.69
Fourth Plan (1969-74)	0.94	2.23	3.25
Fifth Plan (1974-79)	5.23	5.70	5.30
Sixth Plan (1981-85)	2.54	4.11	4.10
Seventh Plan (1985-90)	2.69	5.70	5.80
Eighth Plan (1992-97)	2.70	3.20	6.80
Ninth Plan (1997-02)	0.80	2.00	5.60

Plan	Agriculture & Allied Sector, U.P. (per cent)	Overall Economy (U.P.)	Overall Economy (India)
Tenth Plan (2002-07)	2.10	5.30	7.70

Source: Planning Commission, U.P.

Agriculture and allied sectors happen to be the key sector in UP and engages more than 65 per cent of work force, most of whom are below poverty line. However, the performance of agricultural sector was far from satisfactory. It may be observed here that agricultural growth rate of the State economy from 6th Plan onwards continuously declined under various Five Year Plans and the same was less than the national average during 8th and 9th Plans. Thus, the pressure of population and abysmal poverty has exerted pressure on the State, ultimately resulting fragmentation of land holding.

The table below shows the structure of agro-based industries in Uttar Pradesh:

Table 2: Agro-Based Industries

Particulars	Location
Fruits and vegetable processing compels	Ghaziabad
Frozen fruits and vegetable project	Ghaziabad and Bulandshahar
Vacuum freeze dried fruits and vegetable	Ghaziabad
Potato-based alcohol project	Farrukhabad
Potato flakes/granules project	Ghaziabad
Onion/Garlic powder project	Mainpuri&Etawah
Integrated fruits and vegetables grading, packaging and cooling centre	Saharanpur

Source: Study of the problems of sick SSIs in UP and suggested strategies for their revival, IDS

7. EXTENT OF POVERTY

According to a study by Kozel& Parker (2003), discussions were held with local rural inhabitants, both poor and non-poor, about their perceptions of poverty and the factors that influence their upward or downward mobility. Frequently cited factors were:

- Landlessness, or possession of only poor quality, non-irrigated lands.
- Reliance on intermittent, casual wage employment-especially in the agricultural sector, and on foraging or begging.
- Lack of basic literacy, job skills.
- Limited access to social networks, particularly networks that exist outside the village and help residents find better jobs, especially jobs in the non-farm sector.
- Chronic indebtedness.
- Desertion by male spouse, being widowed, or being a woman living alone without an adult male.
- A high dependency ratio, many daughters and a lack of sons.
- Ill health or disability, particularly of the breadwinner.
- Poor quality mud and thatch housing, insecurity of housing tenure.
- Social or caste identity: in several villages, low caste informants assumed all high caste households to be rich, while they carefully ranked lower caste households by various economic criteria. Among the higher castes, low caste status was assumed to be a strong indicator of poverty.

8. OTHER SOCIAL INDICATORS THAT HINDER DEVELOPMENT

According to Singh & Mishra (2010) girl child is undesirable in many regions of the world. The situation of U.P. with regard to decades of socio-economic planning is proof enough and needs to pull itself out of the conundrum of and inadequate social and economic services. The share of adversity on account of a society marked class and gender. This is proved by adverse sex ratio(0-6 years), female foeticide and neglect higher female IMR higher female child mortality low availability and poor quality of medical and for U.P. was 0.520 compared to 0.676 for India (National Human Development Report). Table 3 indicates statement of crimes against women in the state:

Table 3: Crimes against women

Crime	2001	2002	2003
Dowry Death	2042	2076	1614

Crime	2001	2002	2003
Rape	1634	1743	1156
Molestation	2358	2709	1898
Kidnapping	2387	2610	1920
Eve-teasing	3018	2579	1727
Atrocities/Harrassment498A	5226	6603	4688

Source: Department of Home, Government of Uttar Pradesh

9. CONCLUSION

Thus we see that there are several indicators to show the extent of widespread poverty and gender discrimination within the state of Uttar Pradesh. Several economic indicators go on to prove that there has been slight improvement over the last few years but that improvement has been marginal. Studies have indicated that India could increase its GDP by 2025 simply by giving equal opportunities to women (WEF, online).

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Darwinism of the Business Models

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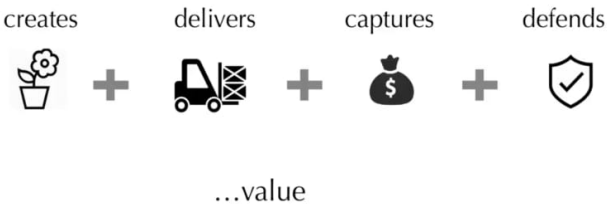
ABSTRACT

*Business model is strategizing fundamental points of business as business Operations, Sources of Revenue, targeted customer group and finance. As the definition highlights the business model encapsulates almost all the potential pillars required for running a profitable business. In this era of tech where no one is untouched with the proliferating advances of this industry and omnipresent hotshots like Cloud, methodologies like Agile which are making industries n*times more productive with n*times lesser resource, its crystal clear to see they are utterly beneficial for us. In terms of business giving it a digital blend has revitalized the entire concept of these models. Author triesto enrich these models with the analysis and make it safer and productive than ever before. After analysing the traditional business models to the newest models introduced by giants like Google, Amazon etc. The author worked on loopholes and how to overcome them and turn them into advantages. After survey done by the author with Business Models in perspective and targeting the affected audience, the final findings are well elaborated ahead.*

Keywords: Digital, Business, Data, Customer, Online.

1. INTRODUCTION

A business model is a logical structure which defines how an organization, creates value, delivers value, captures value and defends value for itself and for the customer as well.



In the traditional mobile phone business:

- Value is created by producing a phone and allowing users to make calls and send messages.
- Value is delivered through phone itself.
- And the phone makers capture value through the sale of the phone.
- The phone makers can defend its business by rushing into the market and become the first mover with new features and lower prices.

According to management guru Peter Drucker:
"A business model is supposed to answer who your customer is, what value you can create/add for the customer and how you can do that at reasonable costs."

2. DIGITAL BUSINESS MODEL

Before defining what a digital business model is, we must understand what business methodologies are not considered as a digital business model and some of them are:

- Selling a product that is in digital form like e-books is not considered as digital business model.
- Distributing a product digitally like building a website and selling your products on that website is also not considered as digital business model.
- Implementing softwares in your product like in home appliances industry, all major manufacturers are rushing to equip their products with internet connectivity. Many of them have an app that accompanies their washing machines and fridges. Doing so would add only a marginal benefit and is not considered as a digital business model.

A digital business model might be defined as :
"A model that leverages digital technologies to improve several aspects of an organization. From how the company acquires customers, to what product/service it provides. A digital business model is such when digital technology helps enhance its value proposition."

In the digital business models since the interaction to the customer is virtual so the only way to understand and fulfill the need of customer is to collect data from them. Hence data is considered to be an important aspect of digital business models. So, some types of data that can be captured are :

Social data: Tweets, posts on Facebook can be tracked to understand brand sentiment – negative or positive.

Customer data can be used to understand shopping behaviours and characteristics that then enable improved targeting and better conversion rates thus lowering cost of acquisition.

Sensor data: can help improve logistics, enable better management of infrastructures, help design smarter cities and model new ways of working.

Transaction data: this is data as a result of a transaction when you buy something from an eCommerce store like Amazon. This data helps the company to analyse the buying patterns of the customer.

2.1 TRADITIONAL VS DIGITAL BUSINESS MODEL

Traditional companies rely on physical assets (buildings, machinery, labor, and distribution) as a foundation for their business model while digital companies rely more on digital assets (information, business intelligence and digital platforms).

For Example-Traditional hotels rely on the availability of physical buildings and rooms as basis for their revenue, while Airbnb (and other digital companies) focus on creating the optimal customer experience through digital services and data analysis (consumer habits and needs) leaving the physical building or room to someone else to provide.

2.2 TYPES OF DIGITAL BUSINESS MODELS

- **Open Source:** This model makes a software free to access for everyone and developers from all over the world can contribute in the development and enhancement of that software. Since it is freely available and supported by a large community of programmers, these softwares become popular really quick among the users. For Example – RedHat is an open source software company which makes money by charging a premium subscription and providing training and services for its open source software.
- **Subscription-based model:** Subscription models basically creates an online platform where they give some kind of content like – movies, web series, educational videos, songs etc. and charge a monthly or annual fee from the users. This model is booming nowadays because of the unmatched quality content customers get right into their smartphones. For Example – Amazon Prime, Netflix, Hotstar, Spotify, Unacademy etc.
- **E-commerce model:** One of the first companies that proved the web wasn't made just of connected computers but of people ready to purchase physical stuff on it was Amazon. It was started as a book store but then it started selling almost everything. Today an e-commerce business model is taken from granted and is among the most used digital business models.
- **Ad-Supported model:** Google is the biggest example which works on this Ad-supported model. In this model the company provide its services free of cost to the users. Like google provides its search engine, YouTube for videos, drive for online storage etc. and in return monetize the data captured via its search engine pages with an advertising network called AdWords. Finally, it takes the money from other brands who want to show their Ads on the webpages, videos etc.
- **Freemium model:**The freemium model is one of the most popular business models online. This is where users get either a basic/free version of a product/service, or a "free" trial. This user will then have the option to upgrade to a paid version of said product/service. For Example – LinkedIn is a social network for working professionals and job seekers and anyone can register on LinkedIn for free and get access to basic features but if the user chooses to upgrade to premium then he/she gets a lot of advanced features.
- **On-Demand model:** In this type of business model companies provide several kind of services to the users on-demand and charge for the same and user can request for the services by using an application on their smartphones. Some popular examples are – Uber, Ola, Zomato, Urban Clap etc.

3. UNDERSTANDING GOOGLE'S DIGITAL BUSINESS MODEL

Google has a diversified business model, and it is making money via its advertising networks. However, there are several other streams as well from where google makes money some of them are – Android OS, YouTube premium, play store etc.

3.1 GOOGLE'S ADVERTISING BUSINESS

Google follows an advertising model to show relevant ads to the users. Relevant means whenever we search for a product on google then after some time ads of that product starts to pop-up on different websites, applications and even on youtube video.As of 2019 83% of total googles revenue is generated by advertising. In order for this model to work perfectly google has created several software applications like – AdWord, Admob, Adsence, Analytics etc.

In order to measure the advertising network performance Google make use of cost-per-click(CPC). CPC is the average amount google charges advertisers for each click by the users on the ads.

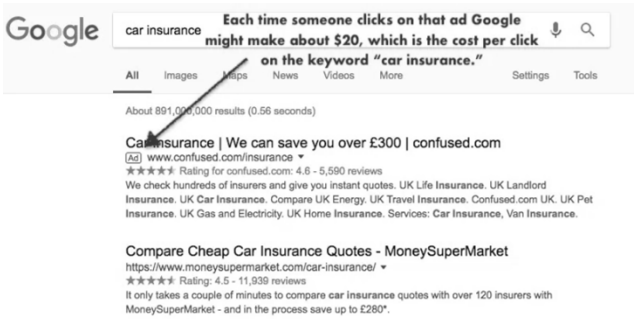


Fig: Cost-Per-Click for the keyword "Car Insurance"

3.2 GOOGLE'S VALUE PROPOSITION

Value proposition is about how you create value for customers.Google value proposition starts from its mission to "organize the world's information and make it universally accessible and useful".

- It creates value for the user by making the information available to him.
- It creates value for advertisers by showing their ads which generates sales for them.

- It creates value for the developers/publishers who create websites/apps and provide content which can be monetized.

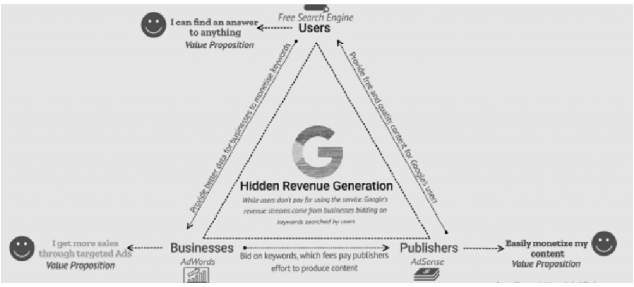


Fig: Google value proposition [infographic]

4. CONCLUSION

After analyzing the business models right from the traditional one to the digital business model used by tech giants. We can say that using digital technology and building a digital business model will lead to higher productivity and reduced transaction cost. Technologies like cloud, Artificial Intelligence, Business Intelligence, Big data etc. plays a very important role in the success of the digital business model and it also lowers the labor cost by replacing the human workers for the redundant tasks.

5. RECOMMENDATIONS

Build awareness internally of how your company and industry will be challenged in the future. Assume that your company and industry will be challenged with negative impact on your competitiveness, and change is needed. Denying the digital challenges will not work.

Assess how well your company is prepared for the digital transformation. There are a number of assessment tools on the market to assess your digital readiness (capabilities) and understand the strengths and weaknesses of your organization (where to focus).

Start recruiting/hiring experts, advisers and change agents/coaches with hands-on experience to drive the digital transformation agenda to increase probability of success.

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Digitalization of Health Insurance Sector in India: A Study

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ABSTRACT

There are various development and transformation of different sectors which can be noticed from the last few decades. According to an estimate of Google India, more than 200 million Indians are likely to make online transactions by 2020. Insurance industry is at transformative stage at present and it is one of the most competitive fields for various insurance companies.

According to a report published by HDFC Life and health Insurance, online insurance market in India is growing everyday from 2014. There are various websites like policy bazaar.com for customers in order to compare insurance policies of different companies before purchasing an insurance policy. With public organization such as LIC entering the digitalized market, the reliability and credibility of online policies have strengthened as a result of this there has been an increase in sale, and renewal of insurance policies via online mode.

According to a report by IRDA, the online life insurance market in India is growing at a compound annual growth rate (CAGR) of 25.36% over the period 2014-19 .According to CEO and MD of HDFC life Mr. Amitabh Chaudhry says, "The number of people who are buying insurance online is rising rapidly, day by day. Giving a push to the growth of online insurance is a host of benefits that insurance policies bought online offer." There is various positive impact of dematerialization of insurance policies which is recognized by IRDA. Online insurance market is beneficial for all stakeholders especially for policy holders which would provide better efficiency, minimized cost harmonized and build more transparency in policy maintenance. Nowadays, health insurance providers as well as consumers are embracing the use of digital tools like mobile health apps, health ATMs, online policy purchase, online premium calculator, fitness bands etc. There are lots of benefits of digitization in health insurance to the insured as well as insurer.

This paper is an attempt to study the impact of digitalization in insurance sector especially health insurance. Major objective of this paper is to study the current stage of digital penetration in health insurance sector and its pros as well as cons .The paper uses secondary data collected with the help of authenticated websites of IRDA, FICCI, Ministry of Health and Family Welfare etc. and analyses the same to offer suitable conclusions and suggestions.

Keywords: E-insurance, Consumer Perception, impact, Health Insurance.

1. INTRODUCTION

Technology is transforming each and every sector of India and healthcare is also not an exception. Technology and digitalization is imperative in order to make newer ways for better health care and insurance services. The health insurance industry in India has been impacted by digitalization but most of the impact has restricted towards sales.

The best example of application of digitalization in health insurance sector is online sale of health insurance policies. Besides, health insurers are using technology for policy administration, customer support service, claim management and premium payment.

From customer's perspective, these services are not enough. There is a long way to cover for full fledged digitalization of this sector on a wider picture. Inter-connected system across stakeholders for advanced customer analytics, customer value led promotions and discounts , policies and products customization as per the needs of customers etc are some more functions which are required to be achieved with the help of digitalization.

2. DIFFERENT STAGES OF HEALTH INSURANCE VALUE CHAIN

The term 'Value Chain' encompasses the entire production process of an industry. From the procurement of raw materials to the yield of final production i.e. from the development health insurance policies to the claim settlement procedure ,there are various stages into which digitalization and technological up gradation are required for a wider acceptance of digital platform in health insurance sector.

STAGE 1: Product Development (Health Insurance Policies developed by the insurers)

STAGE 2: Marketing / Sales (Different promotional and marketing tools employed by the insures and agent to sell the health insurance policies)

STAGE 3: Policy Administration (Policies purchased by the insured and fulfillment of various formalities like premium payment, risk calculation etc.)

STAGE 4: Claim Settlement (At the time of risk occurrence, claims are settled by the insurer to the insured after careful investigation and documentation)

3. OBJECTIVES OF THE STUDY

- To study the reach of digitalization in different stages of health insurance value chain.
- To study the impact of digitalization in insurance sector especially health insurance.

4. LITERATURE REVIEW

Arup Mazumdar, (2011) analyzed the broking system, challenges & opportunities are discussed and new marketing concept as Relationship Model approach has been argued. Indian insurance industry is growing fast after privatization and moving ahead.

Uma, Selvanayaki & Shankar (2011) based their article titled "A Survey of Life Insurance Customer's Awareness, Perception and Preferences" on the survey of 100 customers of life Insurance policies, carried out in Coimbatore. It focuses on different aspects related to customers' awareness and consciousness related to life insurance. The major objective of this survey was to find preferences of customer's towards various life Insurance policies, factors influencing choice of life Insurance policy and awareness about life Insurance brands.

Kotgiri, S. (2013), has stressed on working of insurance companies in Indian scenario and a comparative study is shown among insurance industries on the basis of growth, profitability trends etc. Amount of investment habits change in attitude of customer's investment have also been studied and intepretated.

5. RESEARCH METHODOLOGY

Different stages of health insurance value chain have been analyzed with the help of secondary data published by FICCI and IRDA and scope of digitalization in that particular stage has been studied. Impact of technological penetration in health insurance sector has been analyzed. Conclusions and recommendations are drawn from the study and presented in the paper. Basically, with the help of review of literature, it is derived that there are four stages of value chain of any health insurance company. At various stages, different functions of digitalization can be seen but some functions are still under cover i.e. not fully developed. So, various measures of all round development of digital zone at all stages are given in this paper.

6. INTERPRETATION OF DATA AND FINDINGS

DIGITALIZATION AT VARIOUS STAGES OF HEALTH INSURANCE SECTOR VALUE CHAIN

It has been interpretated that majority of digital initiatives across health insurance value chain are being undertaken across marketing /sales and policy administration. Flow chart 1 analyses the functions of digital up gradation on various stages of health insurance value chain.

(Flowchart 1)

STAGE 1: PRODUCT DEVELOPMENT (Digitalization initiatives under progress)
• Product Customization as per the needs of prospective customer.
• Customer value led promotions and discounts.
• Interconnect systems across stakeholders for advanced customer analytics.

↓

STAGE 2 : MARKETING/ SALES (Digitalization initiatives under progress)
• Real time support to customers/Customer services.
• Mobile apps for customer interactions.
• Online sale of policies.
• Pre and post health checkups and its digital storage.
• Cognitive analytics to understand customer needs and aspirations.
• Multi-device and mobility offerings.
• Multiple channel marketing to drive awareness.

↓

STAGE 3 : POLICY ADMINISTRATION (Digitalization initiatives under progress)
• Online payments and transactions.
• Self-service capability.
• Smart cards for policy holders with policy details.
• Unique Patient Identifier for policy holders.

STAGE 4: CLAIMS SETTLEMENT (Digitalization initiatives under progress)
• Real time updates on claim status and settlement through SMS and e-mails.
• Social media interactions with customers to identify fraud activities.
• Easy storage and retrieval of health records.
• Digital claim submission and settlement.

IMPACT OF DIGITALIZATION ON HEALTH INSURANCE INDUSTRY OF INDIA

There are various impacts of digitalization of health insurance sector for its different parties i.e. the insured, insurers / the insurance companies and the linked hospitals as well as Third Party Administrators (TPAs).Its impact can be easily studied and analyzed with standardized search and identification process that has been used in numerous academic papers. Flow Chart 2 analyses the potential impact of the new technologies on the value chain of health insurance industry.

The first obvious impact of technology is on the value chain of the insurance companies is the way of interaction with their customers (e.g. sales, customer service) and how they adapt to their behavior. Whereas customers traditionally needed personal interaction (agent, broker, bank, etc.) for product information, today they get most information online and directly compare products and prices via aggregator platforms. Some products can be purchased online without any personal interaction. Also in later stages of the value chain, digital technologies such as apps offer assistance and support claim reporting.

The second most important impact concerns the digitalization of all processes leading to automation of all important levels of insurance policy.

(Flowchart 2)

STAGE 1: PRODUCT DEVELOPMENT
• More and better data allow the insurer to recognize the risk pools and apply more risk –appropriate pricing.
• New products with customized facility can be developed.

STAGE 2 : MARKETING/ SALES
• More data resources for better customer segmentation and better calculation of the customer lifetime value.
• Use of videos for product explanations to customer and company news.
• The CRM can be automatically enriched with data from other data sources such as websites etc.

STAGE 3 : POLICY ADMINISTRATION
• Automated asset management.
• New possibilities for risk management.
• Telematics devices are used to get information for risk and pricing calculation.
• Storage of contract information digitally.

STAGE 4: CLAIMS SETTLEMENT
• Prevention of frauds through data analytics.
• Automated calculation and payout of the amount of damage.
• Filing of claims via smart phones.

It seems that health insurance is a little ahead of other types of insurance because of the large number of interactions a company has with the customers. Standardization and automatisation of processes is much more efficiency-enhancing for health insurance compared with any other type of insurance.

7. CONCLUSION, FINDINGS AND SUGGESTIONS

If we consider all of the above discussions from a customer's point of view, then digitalization has great potential to increase value and service of customer by offering better products at lower prices. Better risk calculation and data storage is also a positive impact of technological up gradation of health insurance.

It is also imperative that insurance companies should follow technological research and developments and seek collaborative efforts for learning technology and build up requisite skills. Technology in insurance sector should be properly regulated and insurers should set priorities because they cannot concentrate on all digitalization topics equally.

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The study on Recent trends in Business Startup Financing

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ABSTRACT

The recent economic and world scenario has not just made the business, economy, markets, overall growth, and challenging life, a stagnant but also led to business and all the above factors to standstill. It is indeed a vast challenge for the entire livelihood, but still we have to ignite the potential and grab the upcoming opportunities Start-ups are the vigour for driving job creation, innovation, economic growth, and fuelling healthy and sustainable society. In recent time Indian Start-up ecosystem has tremendously matured, driven by factors like Innovations, Research, Developments, Evolving Technology, Seed Funding etc.

The numbers on start-ups data speaks the volumes about the emergence of start-ups — it is projected that by the year 2020 there will be 11,500 firms from 3,100 start-ups in 2014. Policy makers should tackle with liquidity, creating finance, tackle with short term challenges and should boost the entrepreneurial potential and emerging ideas that will help the economy and mankind in long years. This paper enlights and re-think about our business strategies and the relevance they would hold in the world this current phase.

Keywords: Financing Pattern, Start-Up Financing, Incubations, Seed Finding, Business Strategies.

1. INTRODUCTION

In India on 26th January 2015 Honourable Prime Minister Shri Narendra Modi has enthusiastically announced the "Stand-up India-Start-up India" campaign. Under thisIndia wishes to arouse entrepreneurs to become new Start-up and help existing entrepreneurs to boost their enterprises.

Start-ups have emerged as key drivers of economic growth, innovations, entrepreneurships and job creation, and are often a catalyst for radical innovation and development. People who have new innovative idea and risk nearing capacitiescan launch their start-ups business with minimum resources and maximum utilizations of Factors of Productions.

Theassistance available to the budding entrepreneurs can be divided into three categories Technical help, financial help and Managerial help. Institutions like SIDBI, MSME,NSIC, IIA, Atal Incubation Centres etc. are there to help a these start-ups, some of the private supports are known as Angle Investors, Venture Capitalists. New business firms account for about 20% of employment but create almost half of new jobs on average of the economy.

Access to early stage external capital is a major issue. The challenge is not to merely generate enough seed capital but also to support in expansion, sustenance and maintenance.

From an overall review, India comes across as a deadly under-penetrated consumer driven market with a scope for exponential growth. Finance is of critical importance for the development of the start-up firms, analysing how economy level factors affect the composition of funding sources of start-up would be a useful contribution to the literature.

We categorize the different sources of Recent financing into three major groups. Bank Finance includes financing from local and foreign banks. Equity Finance is financing through issue of stock to angle investors & venture capitalist. Leasing Finance and Supplier Finance are funding through leasing arrangements and trade credits.

The objective of the start-up scheme is to implement the action plan based on three important pillars; to enable various funding support methodology, to make the process easy/ innovative and sustainable in market & develop academic industry partnership like incubators and accelerators.

The paper is structured as follows- The next section presents the literature on recent funding options available for Indian start-upsat recent time.

1-Start-ups to face a significant challenge this current phase:

Most existing start-ups face significant challenges due to the epidemic crisis, as they are more vulnerable than older infrastructures. They engage in high-risk activities compared with other small and medium-sized firms (SMEs), face constraints in accessing funding, ideas, business proposals. Start-ups now become even more financially fragile and need support for their short-term liquidity needs, innovative ideas, clear and scientific approach.

2-Recent world is not only a challenge for existing start-ups but also for the creation of new opportunities as well:

In present scenario, India is facing problem of job hunting due to the growing population. It is estimated that over the next 35 years India will suffer from a severe shortage. This crisis of unemployment and poor economic growth can be resolved by entrepreneurship, self-employment and enterprise development of jobs in terms of new idea generations, creativity we also understand that the Commerce Ministry is planning to build an online portal for information sharing among various stakeholders

including incubators/accelerators, angel investors, VC funds, government departments as well.

2. OBJECTIVE OF THE STUDY

Here's a list of practices that can be adopted by budding entrepreneurs in order to cope with the on-going crises.

1-Integrating design and concept alterations for better start-up finance and boost:

The spread of epidemic has essentially altered the economise demand-supply dynamics of many industries/businesses , including tourism, ticketing, restaurants, logistics etc., and the only way to get through this would be to carefully pivot the business models as per the changed industry culture, social impact, agriculture, and food processing start-ups are expected to gain traction in future.

Business need to realise work upon the needs as per the current market situations. Innovations and idea generations have been the key to overcome the challenges in the evolving market situations. Bringing about innovation in the design of the products and services as per the recent trends and the concepts that we, as businesses, are offering can help overcome this challenge posed by the pandemic.

2-Managing funding and investment in a most viable means:

A diversified and sustainable business approach needs to be followed this time, where all the resources, particularly monetary resources and capital funds, need to be used consciously. Managing cash flow and conserving resources for a few months of current economy of normal operations shall be the key to bright creative future ahead.

On an analysis of fixed v/s variable cost elements within the overall cost structure should be carried out to plan for better financial management and capital allocations. Best policy statement and raising investments post crisis would be required. Even investors will eventually loosen their liquidity and market credibility in the short term, rom the investors' point of view, a tech play would be aroused.

3. Incorporating short cycle planning:

Post this epidemic and once the livelihood gets back to normal, planning for short durations and short cycles should be the mantra. Instead of looking at long-term plans we must ready with three months, six months, and one-year plans should be ready.

In the current scenario,this rapid and quick turnaround has left scores of Indian start-ups which had been plotting expansion and fundraising considering anything and everything to keep them from going.

4-Recent Financing options available in India:

- Bootstrapping start up business
- Angel Investment in Start-ups
- Get Venture Capital assistance for Business
- Funding from Business Incubators & Accelerators
- Content Consumption Behaviour
- Rise in Innovations with Back-Office Industries
- Government Programs that offer Start-up Capital and seed funds
- Alternate ways to raise Money for Business
- Use of E-Business Plans and Digitization procedures.
- Futuristic Solutions for current Problem

5-Maintaining the channel of business, commerce, trade and industry during the crisis:

During this epidemic, it is essential that the channel of of business, commerce, trade and industry are effectively and efficiently utilised. Being open and available to the concerns of all stakeholders, incubate, technology adaptations including customers and depositors &investors, becomes extremely important having financial reserves benefit the functioning of businesses, a well-tied communication network also proves to be a supporting backbone when it comes to expansion of the business back up from this relative slowdown.

6-Governments initiative towards start-up boost:

As the expectations from 2020 were very high. Nine Indian start-ups joined the Unicorn club and out of that four got publically listed named OYO Rooms, Paytm, Delhivery and Udaan were among the start-ups to grab the most valuable deals.

The government's Centre for Augmenting War along with Health Crisis (CAWACH) has shortlisted 52 start-ups developing solutions to tackle the pandemic.

7-Recent Funding patterns in India:

The general trend is that the seed/angel investments are getting bigger every year, Investors are willing to fund companies with no revenue but they should have a reasonable profits and goodwill. There will be serious concerns of raising additional funds.

Of the total 600 starts up in 2015, more than are 450 have received seed/angel funding and the others have received the other private venture funding's.

It is only in the last six to eight years that many aspects of open innovation areresearched, tested, used and practiced. However, almost all research efforts are in largecorporates we still have to see reliable data in Indian context, including corporatesector, incubation of companies and new companies alone. In India, the pace ofincubation initiatives has increased in the last five years and is expected to reach a significantmass in the near future.

3. CONCLUSION

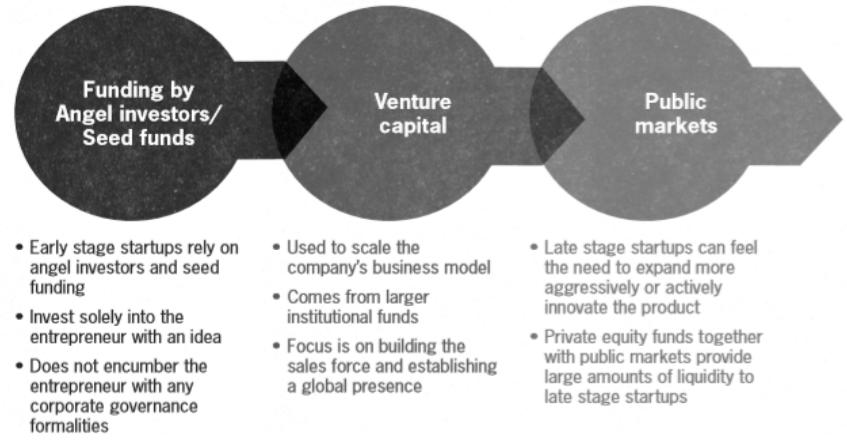
This Research will help new startup understand initial finance with environmental successfactors and guide them to suitable strategies in this operational environment. This study willhelp the planning of financing plans, policy makers, allocate resources and evaluate the righttools. The model developed as a study might be of help to the start-

ups, incubators, researchers and students to comprehend & persuade of each of the factors on theperformance of the start-up finance and financial outcomes.

To make a successful start, institutions should consider providing access to financial support as an important andcompulsory service. It will affect the results of incubation, in addition to its other proposalsof basic and value-added services such as consulting, financing, innovations idea generations, capital assistance etc. Since the success of theincubated companies will finally give the oxygen to the success of the start-up programsin the long future projections.

To strengthen access to financial aid, the Government, venture capitalists should consider building a strongpartnership with the industry or in a special set of incubator which focus on certain areas of work movement as a knowledge partners. This will help to play the role of innovation moderators and help them to becomea role model.

An overview of Start-up Financing lifecycle:



(Source: grant Thornton-startups report)

Overview- Startup India- the next big theme for economic growth:

	2015		2025	
Total no. of Start (–)	10,000		1,00,000	
Employment generups ation ('000)	n/a		3,500	
Expected contribution (US$ b)	n/a		500	
Global startup ranking	3rd (Behind the US and the UK)		Aims to be No. 1	
Driving factors	• An emerging economy • Young population • Easing FDI norms	• Growing middle class • Rise in discretionary spending • Focus on standard of living	• Increasing internet users • Urbanisation • Increasing domestic consumption	
Challenges for startups	• Lack of awareness • Multiple clearance requirement • Multi-tax existence (Octroi, VAT, Excise, ST etc.)	• Unorganised market • Infrastructure in Tier II & III cities • Lack of early stage funding • Lack of mentoring	• Stringent Exit policies • Ease of doing business • Corruption/red tape • Technological risk	
Government Initiatives (including upcoming)	• Startup Ecosystem • Digital India • Online clearance portal	• Tax exemption • MUDRA Bank • India Aspiration Fund	• Easing fund raising • Other funding initiatives • Setting of SETU	• Focused sectors • Awareness initiatives • Setting up incubators

(Source: NASSCOM Start-up report)

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Challenges and Opportunities in Mutual Fund Investments

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ABSTRACT

Mutual funds have given an opportunity to open new aspects of prospects to many individuals. These funds extremely take an investment to the thresholds of individuals. In India individuals generally goes for such kind of information, which does not provide a barrier against inflation and has negative real returns. The success of mutual funds is basically the consequence of the integrated endeavor of proficient fund managers and aware individuals. Mutual funds have come as a much-needed help to those individuals who find themselves to be eccentric in the investment. A competent fund manager should prepare the performance to meet an individual's requirements by analyzing investors' behaviors and recognize their needs and expectations. Thus we can say that it is very important to identify the needs of mutual fund individuals, their performance for mutual funds schemes, and its performance assessment in the current scenario. In this paper we search different aspects related to the mutual fund investments and figured out the some important parameter helpful for suggesting the particular mutual fund to an individual.

Keywords: Mutual Fund, Investment, Risk, Opportunities, Recommendations.

1. INTRODUCTION

A mutual fund is an investment instrument that pools in money from different investors and invests the collected corpus in a set of different asset classes such as equity, debt, gold, foreign securities, etc. Mutual funds are becoming increasingly popular in India due to the various benefits they come with. Mutual funds feature an attractive performance history of returns higher than those earned on conventional instruments of investment. Mutual funds enable investors to create diversified investment portfolios with low investments. Another feature that makes mutual funds a preferred choice among investors is the professional management of funds. A mutual fund is managed by a fund manager who is an expert carrying vast experience in the investment industry. This assures investors that their money is in safe and secure hands. Another fact which further strengthens investors' confidence is that in the mutual fund regulated by capital markets regulator SEBI (Securities and Exchange Board of India) and AMFI (Association of Mutual Funds in India).

2. LITERATURE REVIEW

[1] In this paper, we review the three artificial intelligence approaches i.e artificial neural network, genetic algorithms, and particle swarm optimization, and apply and compare their performance in financial applications. The financial market can be classified into three domains that are financial forecasting, credit evaluation, and portfolio management. The performance and accuracy of these methods in handling the financial problems are higher compared to old traditional approaches, especially in nonlinear models. In other cases, the performance is not yet appreciable.

[2] This paper presents an improved regression analysis based on the genetic particle swarm algorithm which gives a more accurate result. Using PSO a new operator is constructed. Using this algorithm, we can select a genetic algorithm and genetic features and searching capabilities of particles towards the optimal forward can be drowning. Using this algorithm in financial analysis results shows a great performance boost in convergent speed.

[3] In this paper, a personalized recommendation system is proposed for the equity fund market based on the idea of transfer learning. A modern portfolio is created for equity funds and investors.

[4] This paper presents juxtaposition between two algorithms of differential evolution (DE) and particle swarm optimization (PSO). In the prediction of daily stock market prices, these algorithms are used in the training of feed-forward neural networks. The future value of company stock or other financial instruments traded on a financial exchange can be determined by the future value of a company.

[5] This paper presents integrated approaches using historical price data with TIS to improve prediction accuracy. The model uses a fast genetic algorithm technique to optimize and select the best parameters integration of four TIS and two proposed fitness functions.

[6] This paper presents an approach that gives the most accurate prediction of the financial market. The model analyzes the exact market aspects and applies to any trading method to improve forecasting accuracy. The paper proposes how we can apply practical approaches to the theatrical concept.

[7] This paper demonstrates a model for investors of mutual funds to construct a profitable portfolio. There are two stages in this model, the first stage called DEA.In the first stage, the Sharpe ratio and Treynor indices of mutual funds and monthly rates of return (ROR) of mutual funds are used to select the portfolio of mutual funds. In the

second stage, the linear regression model, the fruit fly optimization algorithm (FOA) and the general regression neural network (GRNN) are used to build a prediction model for asset values of each of the basic mutual funds of the portfolio.

[8] This paper proposed the model of genetic programming (GP) to the prediction of price data in the Japanese stock market. The purpose of this study is to study to select the right stocks when investing in the stocks market to sell and buy assets. This study presents a successful genetic programming application where we can achieve high profit from the stock market. This model is compared with the neural network and shows a more accurate result with GP based approach.

[9] This paper compromises the optimization of technical parameters for stock market assets. The prediction of market trends is a great issue and some technical parameters are analyzed for this purpose. The main issue in the use of technical parameters is its value. This paper expands the previous works by adding more indicators and applying them to more complicated problems.

[10] In this paper, swarm intelligence algorithms are used to solve the cardinality constrained mean-variance portfolio problem with entropy constraint. This paper presents modified firefly algorithms for the CCMV portfolio model with entropy constraints. It is the latest very successful swarm intelligence algorithm. This algorithm was modified and tested with standard portfolio benchmark data sets used in this paper. This algorithm shows improved results than another state-of-art algorithm.

[11] This model presents an introductory concerning a multi-agent recommender system for computational investing. The collaborative filter evaluates the investor pairs' investing behaviors and actions that are experienced in the economic market to recommend the same ones to the target investor.

[12] This paper presents a new evolutionary calculation method to predict the net value of domestic mutual funds. Some open-end balanced stock fund data is used to form domestic securities companies' websites. In this model five kinds of forecasting performance evaluation parameters are used and the rate of return is analyzed.

[13] This paper presents a methodology based on transactions of trusted mutual funds and their corresponding stock holding portfolio. The tool for social network analysis is used to analyze mutual funds which are formed by stockholding portfolio holders.crisil-1 the rating shows that this model is effectively used as a reliable portfolio recommendation system for non-professional investors looking for stock investment guidance.

[14] This paper proposed a recommender system that can filter useful information for users so users can select useful products according to their needs. In this paper, a hybrid collaborative movie recommender system combination of fuzzy c means clustering with a bat optimization algorithm is used to reduce the scalability problem and improves the recommendation efforts. The combination of these two techniques gives better results compared to other techniques.

[15] In this paper, a recommendation system is proposed for making decisions and providing detailed information about a required product or a service. This paper proposed an intelligent approach to deals with a huge amount of heterogeneous data to produce accurate recommendations for customers. The proposed system was tested over the real-world dataset and obtained improved accuracy and response time significantly better than traditional approaches.

[16] This paper proposed a coinciding development of a multi-objective of a multi-objective evolutionary algorithm that solves the emergence of complex problem formulation in the finance and economics areas. This paper provides a survey on portfolio optimization problems and other applications in the field.

According to literature review it is found that there are some research gaps in previous studies. Based on these research gaps some objectives are formulated.

3. OBJECTIVES

- To analyze the factors influencing investments decisions of retail investors in Mutual funds.
- To study the investors perception and preference towards Mutual funds.
- To identify the factors which prevent the investors from investing in mutual funds?
- The factors discriminate the investors buying decisions in Mutual Funds industry.

4. FACTORS FOR SELECTING A MUTUAL FUND CATEGORY

1. Investment Objective

Investment impartial refers to an investor's financial aim which he/she aims to achieve with the mutual fund investment. The investment objective can be any short-term or long-term financial desire of the investor – buying a house/car, financing children's higher education, going on a vacation, retirement, etc.

2. Time skyline

Time skyline refers to the time period for which an investor desires to keep his/her money invested in a mutual fund plan. It can be either as short as 1 day or as long as more than 5 years. Different fund variety work best for different time horizons.

The market can be highly vaporous in the short term but tends to provide higher earnings growth over time. The below is a table of fund categories for different time

horizons:

Time Horizon	Mutual Fund
1 day – 3 months	Liquid Funds
3 months – 1 year	Ultra Short-duration Funds
1 year – 3 years	Short-duration funds
3 years – 5 years	Hybrid/Balanced Funds
More than 5 years	Equity Fund

3. Risk tolerance

Risk tolerance mention to the amount of risk an investor is willing to take with his/her invested money. SEBI in 2015 made it compulsory for all mutual fund houses to show a RISKLEVEL which consists of 5 levels of risk related with the invested principal amount.

Time Skyline	Low Risk	Medium Risk	High Risk
Short Duration (up to 3 years)	Liquid Funds, Ultra Short-duration Funds	Short-duration Funds	Arbitrage Funds
Medium Duration (3 years – 5 years)	Short-duration Funds	Balanced Advantage Funds	Equity Hybrid Funds
Long Duration (5 years and above)	Large Cap Funds	Multicap Funds	Mid Cap Funds, Small Cap Funds

5. FACTORS FOR CHOOSING BEST MUTUAL FUND SCHEME

After choose the mutual fund classification on the basis of investment risk tolerance, choose a mutual fund scheme within that class on the basis of the following elements:

1. Performance against Benchmark

A benchmark index of a mutual fund scheme is a quality against which its performance and stock assignment are juxtapose. The benchmark index guides the investment conviction of the scheme. Thus, the asset allocation of a benchmark index should match the investment objective of the scheme.

2. Performance against Category

Another factor which is fairly important to evaluate while selecting a mutual fund scheme is its performance in juxtaposition to its active peer group. This helps in getting a comprehensive understanding of the fund's performance. This juxtaposition should only be among the same type of mutual fund schemes. For example, a large cap equity mutual fund can only be contrast with other large cap mutual funds and not against mid cap funds or debt funds.

3. Consistency of Performance

A good mutual fund is one which is able to cause good return for its investments constantly over a period of time and not just hurricane returns. The fund should be competent of providing compatible returns in both compelling and defeatist periods of the stock market.

4. Fund Manager's Experience

Another foremost factor to be contemplate while selecting a mutual fund is the performance of its fund manager and how long he/she has been at its tiller. For this, an investor should look at the fund manager's experience with the fund in question and with other funds presently managed or managed in the past by him/her.

5. AMC Track Record

An Asset Management Company (AMC), also known as fund house, is the company which directs a mutual fund scheme. For example, HDFC Mutual Fund is the name of the AMC which direct schemes like HDFC Equity, HDFC Top 100 or HDFC Small Cap Fund. Many conclusions are made at AMC level by the Chief Investment Officer (CIO) of the AMC.

6) Scheme's Assets Under Management (AUM)

The AUM of a mutual fund plan refers to the value of assets under its management. In other words, it simply means how many contribution the plan has received. In the equity classification, mainly in small cap funds, a large AUM can make it hard for the fund to enter and exit companies.

7) Expense Ratio

The expense ratio of a fund throwback the fee charged by a AMC for the management, promotion administration and distribution of a mutual fund. All expenses sustain in the running of the fund are incorporate in this figure. This figure is perfect at 2.25% of the total fund assets by capital market regulator SEBI (Securities and Exchange Board of India).

6. RESEARCH METHODOLOGY

- **Research Design:** This research study is based on analytical and descriptive research. This study related to mutual fund investments in India.
- **Sample Size:** The sample size of 200 respondents is used in this present study. Data is analyzes and hypothesis is tested against these data.

Testing of Hypothesis: The study is based on the conceptualization of the following Null Hypothesis:

H10 = There is association between liquidity factors and investment decision in mutual funds.

H20 = There is direct relationship between financial awareness level and investment behavior in mutual fund.

H30 = There is association between gender and investment decision in mutual fund.

H40 = There is direct relationship between age and risk taking factors.

For the motive of this study a questionnaire was developed. The questionnaire contains the following three sections:

- The first section include of the profile of the investors.
- The second section covers the relative significance given on the information sources to select and invest the mutual funds.
- The third sections comprise of the relative importance given to the variables contemplate to invest on Mutual funds.

The information sources to select and invest on Mutual funds are recognizing with the help of reviews.

The variables contemplate to invest on mutual funds are drawn from the reviews.

7. CONCLUSION

Mutual funds have appeared as part of the main class of financial arbitrators which serves the needs of retail investors. The crucial factors that determine the investment decisions of retail investors are tax benefits, high returns, prices, and capital treasure. Pungent past experience is a major intercept factor when considering investment conclusions. This study has been managed on various elements to determine investors' investment decisions in Mutual funds. The results of the survey have divulged that risk, return and liquidity of assets intensify the investment in mutual funds. Investors who take part in our survey trust that there is a low risk in returns and liquidity in mutual funds. This study is trying to recognize key variables for determining mutual fund investment decision.

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Study of ARIMA Model in Forecasting HCL Stock Returns

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ABSTRACT

Forecasting of stock returns is and will always be a vitally important financial notion confronted by investors. Their exist fluctuations in stock returns and investors are always keen to show their interest as they want to take the advantage of potential returns from the organization by way of investing in stocks. Hence, it becomes a matter of concern for investors to predict future stock returns so that they can attain their objective of wealth maximization. This reason creates an urge to explore forecasting of stock returns empirically. This research paper employed ARIMA methodology, developed by Box and Jenkins in 1970, which rely on the previous values of the variable itself. In the paper, this methodology is applied on the stock returns of one of the top IT companies listed on NSE i.e. HCL. Data of daily return was collected from 1 April 2008 till 31st March 2018. Results concluded that ARIMA model had strong capability of forecasting in short run.

Keywords: ARIMA, Stock Returns, Forecasting.

1. INTRODUCTION

Forecasting stock returns is always been a topic for discussion in contemporary financial literature. Investors try hard to contemplate possible future returns of a company's given common stock. In the present research paper, an effort has been made to envisage our variable by way of the lagged values of the variable itself. Based on the popular notion of letting the data speak for itself (Gould,1981). Therefore, ARIMA (Auto Regressive Integrated Moving Average) technique has been applied on daily stock returns of HCL from 1 April 2008 till 31st March 2018 to forecast the stock returns on the basis of its previous values and error term. There have been many studies conducted on different sectors that have applied ARIMA model for prediction of various time series variables which might include stock prices as well. However, fewer studies have been conducted on IT sector to envisage stock returns of IT company using ARIMA model. More specifically, no study, as per review of literature, has been done using the daily stock returns of IT company. The present work initiates to fill this gap by taking daily stock returns of one IT sector company in India i.e. HCL. HCL Technologies Limited firstly emerged as a separate company in 1991 when HCL (Hindustan Computers Limited) entered into the software services business. It is an Indian multinational company, a subsidiary of HCL Enterprise, headquartered in Noida, Uttar Pradesh. It was founded by Shiv Nadar.

2. REVIEW OF LITERATURE

Afeef, M & et.al (2018) employed ARIMA methodology to forecast stock prices of a Pakistan based company namely Oil & Gas Development Company Limited (OGDCL). The researcher considered daily adjusted closing stock prices of OGDCL for almost 15 years starting from 2004 till 2018 with 3632 observations. Results depicted that for the purpose of prediction in short-run, ARIMA modeling has great potential. Gay (2016) made an effort to investigate the relationship of macroeconomic variables on stock returns of BRIC countries that include Brazil, Russia, India and China. He made use of the Box-Jenkins method to serve the purpose. The factors taken into account were the exchange rates and the oil prices. No statistically significant association was found to be there between the given macroeconomic factors and stock returns for any of the BRIC economies. Gupta, S & Kashyap, S. (2015) did endeavour to generate prediction of exchange of Indian currency vis-à-vis USD, GBP, YEN and EURO. They applied Box-Jenkins methodology (ARIMA) on the collected data of twelve months starting from April 2014 to March 2015. Hamjah (2014) also used ARIMA for prediction of rice production in Bangladesh. He compared the actual data of rice production with the predicted values and concluded that model had a very short run prediction capability. Mondal, P & et.al. (2014) studied 56 stocks from seven different sectors listed on NSE. Results indicated that ARIMA provides best accurate results as above 85% of predictions using ARIMA model for all sectors were accurate. Moving to specific sectors, forecasting of FMCG sector was more accurate as compared to the predictions for Banking and Automobile sectors. Devi, B & et.al. (2013) selected top four companies.The historical data of selected companies for past five years was collected and trained by applying ARIMA model with different parameters.

3. OBJECTIVES

- To forecast the stock returns of HCL company.
- To analyze the variation in actual and forecasted stock returns of HCL.
- To check the applicability of ARIMA model in predicting stock returns of HCL.

4. ARIMA MODEL

ARIMA model is explained in Box-Jenkins methodology.ARIMA models are generally expressed like "ARIMA(p,d,q)". "AR" in ARIMA is called Autoregressive term in the model. "I" in ARIMA is called

the Integrated feature of a time series."I" also takes care of differencing to make a time series stationary. "MA" in ARIMA represents Moving Average term in the model. It assumes that a time series is a function of its errors.

5. RESEARCH METHODOLOGY

The general equation of an ARMA model (Asteriou & Hall, 2007) is as follows:

$$Yt = \varphi 1Yt\text{-}1 + \varphi 2Yt\text{-}2 + \text{-} + \varphi pYt\text{-}p + \varepsilon t + \theta 1\varepsilon t\text{-}1 + \theta 2\varepsilon t\text{-}2 + \text{-} + \theta q\varepsilon t\text{-}q$$

Here, Yt is the predicted value of the variable, Yt-1, Yt-2,…..Yt-p are the lagged values of the autoregressive term(AR), εt is the error term, εt-1, εt-2, - - - , εt-q are the lagged values of the moving average(MA) or error terms, φ and θ are the coefficients of the regressors.

Descriptive Statistics

HCL	
Mean	0.0833
Maximum	17.2182
Minimum	-16.8992
Std. Dev.	2.3581

Stock returns of HCL ranges from minimum of -16.8992 and maximum of 17.2182 while it's mean came out to be 0.0833. This implies that HCL shareholders lost around 16.89% whereas earned maximum 17.21% during the period of study. The variation in stock returns has been explained with the value of standard deviation which stood as 2.3581.

6. UNIT ROOT TEST

As the series seems to be non stationary, so as to make it stationary first of all stock prices of HCL have been converted into stock returns. Further, in order to check the stationarity of HCL stock returns series researcher applied ADF test statistic on level at 5% significance level. The results of ADF test depicts the value of ADF test as -36.6789 at different level of significance along with the probability value as 0.00 which is less than .05. This blatant the stationarity of series at first differencing. Furthermore, Durbin-Watson value 2.00 confirms the absence of autocorrelation in the series.

7. MODEL IDENTIFICATION

After achieving the results of stationarity in the series through log normal stock returns values, researcher stepped further in the process to identify an appropriate model. In order to locate the best fitting ARIMA model for the stock returns of HCL, a function "auto.arima" has been applied in R Studio. After applying the function best model has been estimated which identified the number of AR and MA terms on which returns of HCL depends. Finally, the ARIMA model (3, 0, 2) came out to be as the best fit model for prediction of HCL stock returns.

8. MODEL ESTIMATION

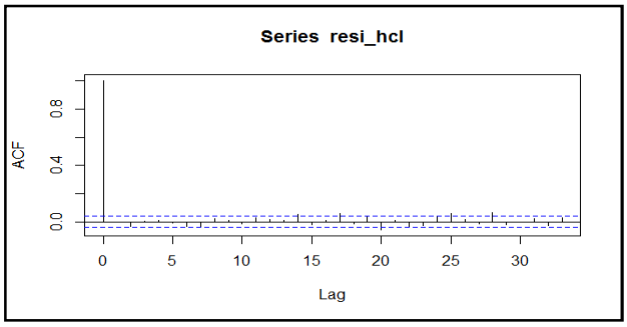
Using R studio, following are the estimated parameters on the basis of model identified along with the mathematical equation of ARIMA model :

$$Yt = 0.0827 + 1.4049\ Yt\text{-}1 - 0.8301\ Yt\text{-}2 + 0.0008\ Yt\text{-}3 + 0.0827 - 1.3847\ \varepsilon t\text{-}1 + 0.7716\ \varepsilon t\text{-}2$$

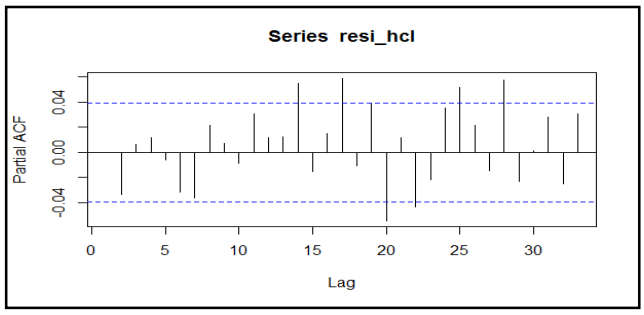
Here the p-value of each coefficient has been examined in order to determine whether or not the parameters are significantly significant. As a result, it has been discovered that p-values of coefficients ar1, ar2, ar3, ma1, ma2 are found to be significant as its value comes out to be less than 5% significance level.

9. RESIDUALS DIAGNOSTIC

For a best forecasting model or ensuring the appropriateness of model, it is mandatory to diagnose the leftover residuals generated from the model. If these are left unchecked then, it may lead to the problem of autocorrelation. Consequently, autocorrelation will decrease the accuracy and lead to misinterpretation of data (Pillai, 2017). Therefore, with the help of correlograms of ACF and PACF, researcher tests the autocorrelation in the error variance of the selected model to ensure that the residuals are white noise as well as uncorrelated and purely random in order to consider the generated model as fit model.



Plot of ACF



Plot of PACF

The above figure of ACF (Autocorrelation Function) plot for daily stock returns of HCL depicts that the first lag in the series is significant as this represents the autocorrelation between each term and itself while remaining of the spikes are not statistically significant

means they are not significantly different from zero which results in absence of high correlation in the returns. Furthermore, in the plot of PACF each vertical line (spike) corresponding to each lag shows the value of autocorrelation function for the lag. Every spike which rises above and falls down the horizontal line is considered to be statistically significant. In the PACF, lags are statistically significant at 14,17,20,25 and 28. This interprets that HCL stock returns are correlated with each other at these lags whereas remaining all the lags are not statistically significant from zero and a spike that's close to zero is evidence against autocorrelation.

10. NORMALITY TEST

Moreover, for choosing the most accurate model , it is mandatory to fulfill an assumption which states that error terms must be white noise (means constant variance, normally distributed, zero mean). In order to test the normality of data, Jarque–Bera test has been applied. Results represents the probability value as <2.2e-16 which is less than .05. This diagnostic check concluded that null hypothesis is not accepted and the residuals obtained from the ARIMA (3, 0, 2) are not normally distributed.

11. FORECASTING

Finally, when researcher have identified a successful ARIMA model (3, 0, 2), then forecasting of next 7 days log normal returns of HCL has been done. The daily stock returns are compared with the returns generated by the best fit ARIMA (3,0,2) model which are shown in table below along with the calculated value of S.E.

Forecasted Returns of HCL

Date	Actual Returns %	Forecast Returns %	SE%
2 April 2018	1.119050742	1.210641987	-0.09159
3 April 2018	-1.051966083	1.848150851	-2.90012
4 April 2018	-1.037084742	1.404006545	-2.44109
5 April 2018	0.291469524	1.174433693	-0.88296
6 April 2018	-0.981884945	1.027971721	-2.00986
9 April 2018	0.062962382	0.924175453	-0.86121
10 April 2018	-0.504812556	0.845534811	-1.35035

Source: Output from R Studio

Above table represents actual stock returns and forecasted stock returns of HCL along with its standard error. The results depicts that all the returns from 2nd April 2018 till 10th April 2018 have been over forecasted. The range of over forecasted values lies between 0.09% to 2.90% which signifies that standard deviation of accuracy of forecasting of HCL is nor too high nor too low which means the values are spread over a range and there might be some stocks for which ARIMA model doesn't produce good results but overall confirms that model is precise or best fit for prediction.

12. FINDINGS & CONCLUSION

The findings of the study from the above analysis states that ARIMA model (3,0,2) is the best fitted model to forecast the log normal stock returns of HCL. The results represented that all the returns from 2nd April 2018 till 10th April 2018 have been over forecasted. The range of over forecasted values lies between 0.09% to 2.90% which confirms that model is precise or best fit for prediction. From the above findings it can be concluded that ARIMA model has sufficient potential to predict future values in short run.The implication of the study is that it is expected to be worthful for prospective investors by guiding them to invest or disinvest in a particular stock at correct time.

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Investors Awareness and Education: Role of SEBI

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ABSTRACT
The Securities and Exchange Board of India (SEBI) plans to embark on a national strategy to create investor awareness. One of the main objectives of SEBI is to protect the interest of investors. Educatedinvestor is the protected investor. Education and awareness along with grievance redressal were also the thrust areas for capacity building and for making investors confident and aware while investing in the securities market, objective of this paper is to analyse the role of SEBI in creating awareness among various sector of society. As per SEBI officials to increase awareness and investor education, SEBI has proposed a three-dimensional strategy going forward comprising of mass media campaign, coordinated approach with various regulators for financial literacy initiatives and a national strategy for financial education.

Keywords: Investor Education, Investor Awareness, SEBI, Awareness Campaign, Financial Education, Regional Seminar.

1. INTRODUCTION
As capital markets develop and the regulatory environment becomes more vibrant, that is to say that the structural issues that plague markets in nascent stages of their growth and modernization have been dealt with and change is more a process of up-gradation rather than modernization, it becomes important to address more sophisticated issues that plague the market and also grow its base of investors

Section 11(2) (f) of the SEBI Act empowers it to promote investor education and foster training for intermediaries in the securities market. Alongwith investor education and training, SEBI has alsoactively pursued investor grievance redressal with aview to protecting investor interests and enhancing the confidence of and increasing the participation of investors.

The Securities Exchange Board of India has embarked upon financial education programmes through a nationwide campaign. To impart financial education to various target segments, namely, school and college students, working executives, middle income group, home makers, retired personnel, self help groups, etc., SEBI has empanelled Resource Persons throughout India. The Resource Persons are trained on various aspects of finance and equipped with the knowledge of financial markets. These SEBI Certified Resource Persons organise workshops for these target segments on various aspects, namely, savings, investment, financial planning, banking, insurance, retirement planning, etc.

SEBI also conducts investor education programmes through investor associations all over the country. It also conducts regional seminars through various stakeholders, namely, stock exchanges, depositories, Association of Mutual Funds in India, Association of Merchant Bankers of India, etc.

2. RESEARCH METHODOLOGY
The objective of this research paper is to analyse the role of SEBI in investor's awareness. This paper is primarily based on secondary data. All the relevant data is collected through the SEBI annual reports. Time span covered under this research paper is from 2011to 2019.

3. INVESTOR EDUCATION AND AWARENESS
For its mandate of investor protection, SEBI's major thrust was on undertaking more investor education and awareness programmes and reaching more investors / potential investors for this purpose. Education and awareness along with grievance redressal were also the thrust areas for capacity building and for making investors confident and aware while investing in the securities market.Office of Investor Assistance and Education (OIAE) undertakes financial education and investor awareness activities.

SCHOOL CURRICULUM
Governments have recognised that financial education should start at school and that people should be educated about financial matters as early as possible in their lives. OECD has developed guidelines aimed at providing high-level international and non- binding guidance to assist policymakers and interested stakeholders in designing, introducing and developing efficient financial education programmes in schools. The Central Board of Secondary Education (CBSE) in India has appreciated the need of financial literacy in building capacity to handle personal finance in an informed and skilful way. It is heartening to note that CBSE has agreed, in principle, to introduce it in an integral manner in school education (Post Primary Level) and to facilitate the process, a committee of experts has been constituted.

INVESTOR AWARENESS PROGRAMMES/ WORKSHOPS

Various investor awareness programmes were conducted by SEBI with the help of exchanges, depositories etc. SEBI also conducts independent awareness programmes and joint programmes in association with other entities. During 2018-19, IAs have conducted 135 investor awareness programs (206 awareness programs were conducted during 2017-18).

Exhibit 1: Trends in Awareness Programmes/ Workshops Conducted by SEBI

Particular	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Number of Programmes	15	26	40	149	175	216	224	223	292	474	206	135

MASS MEDIA CAMPAIGN

In December 2012, SEBI launched a Multi-media Investor Education and Awareness Campaign, with objective of giving important messages, creating general awareness among the investors and prospective investors across the nation. In 2016-17, SEBI carried out a media campaign cautioning against indulging in Dabba trading activity through TV and radio and cautioning against unregistered CIS / ponzi schemes through radio and bulk SMSes.During 2018-19, SEBI has initiated the process of organising nationwide campaigns through social media and various digital channels such as Graphics Interchange Format (GIFs)/ Banners etc.

Since beginning its scope and reach significantly in terms of investor population and geographical landscape.Sessions are taken by SEBI officials and officials from trade bodies at various levels. During FY 2018-19, SEBI in association with stock exchanges, depositories, AMFI and commodities derivative exchanges has conducted 197 regional seminars.Out of the 197 regional seminars conducted during 2018-19, 15 seminars were conducted in Tier I cities, 65 in Tier II cities and 117 seminars were conducted in Tier III cities. Further of 197 regional seminars, 145 regional seminars were conducted on equities market in association with stock exchanges and depositories.

REGIONAL SEMINARS

Exhibit2 : Regional Seminar conducted by SEBI

Region	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Cumulative total since launch of initiative
HO	-	-	-	2	9	14	19	-	59
ERO	-	-	-	1	17	26	27	-	95
NRO	-	-	-	7	4	12	39	-	81
WRO	-	-	-	15	2	9	20	-	128
SRO	-	-	-	19	16	29	40	-	139
Total	47	44	77	51	48	90	145	197	699

Source: SEBI annual reports

AWARENESS ABOUT COMMODITY DERIVATIVES

SEBI intends to increase awareness about thenewly inducted commodity derivatives segment, specifically among farmers so as to increase their participation in this market segment. Hence, three awareness programmes were conducted in March 2017 .In 2018-19, the SEBI recognized CoTs have conducted 31 commodities awareness programs in various commodities.

A DEDICATED INVESTOR WEBSITE

A dedicated website http://investor.sebi.gov.in is maintained for the benefit of investors. The website provides relevant education/awareness material and other useful information. Further, schedules of various investor education programmes are also displayed on the website for the information of investors.In 2018-19, SEBI's investor website has received around 1,83,241 total page views.

INVESTOR ASSISTANCE

SEBI provides assistance/guidance to investors by replying to their queries received through e-mail, letters and during visits to SEBI offices. In 2016-17, more than 8,800 e-mail and letters were replied to and more than 7,900 investors were assisted on their visit to the SEBI offices.In 2018-19, over 4,400 queries were replied in total, out of which approx. 4,100 queries were replied

through e-mails, 165 through letters and 158 through phone-calls.

4. CONCLUSION

SEBI's role as investor protector is not limited to educational programmes and redressal mechanisms. SEBI also has vigorous and comprehensive enforcement mechanisms, particularly against unregulated collective investment schemes defrauding millions of investors in the country. SEBI aggressively pursues violators of securities laws, imposes severe monetary penalties, imposes disgorgement and prevents them from operating in securities markets.

SEBI has been taking various measures to expedite the redressal of investor grievances. Various investor awareness programmes were conducted by SEBI with the help of exchanges, depositories etc. The regional seminars provide investors useful information related to the securities market. This paper concludes that although SEBI is taking various measures to create awareness among the various parts and various segments of society, but as compared to the population of India this seems to be very low. But better late than never, still we can say educated investor is a protected investor.

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Consumers Skepticism and Green Internet Advertising

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ABSTRACT

The purpose of this paper is to analyze the impact of Consumer's Skepticism towards Internet Based Green Advertising with in consumer demographic variable. A survey of 100 Consumers from Delhi NCR, India who watches online Green Advertising has conducted for this quantitative research. The outcomes show that consumers' educational degree and profession can influence skepticism. Higher degree or higher profession may lead to vary in skepticism level. The originality of this study is in evaluating consumer's skepticism against the several aspects of demographic profile of consumers.

Keywords: Consumer Skepticism, Online / Web / Internet Green Advertising.

1. INTRODUCTION

Green Advertising is the paid type of non individual promotion from sponsor to the group of viewers. There are various medium accessible for advertisement or promotion of item, as electronic, print, customary and modem media. From the cutting edge modern media, web media is the most overarching media and have most astounding group of spectators than other media.

2. BACKGROUND

Obermiller&Spangenberg (1998) clarified skepticism toward Green Advertising as the propensity of disbelief towards Green Advertising claims. We can say it is the capacity of buyer to see Green Advertising with suspicious sentiment. Kang (2019)in his research found overall youngsters' frames of mind toward web based Green Advertising were genuinely skeptic. About 72% of youngsters either firmly dissented (27.1%) or deviated (44.8%) with the announcement, "Items publicized are consistently the best items to purchase." Similarly, with the announcement, "Green Advertising attempts to make individuals purchase things they don't generally require," the larger part (62.5%) showed doubtful demeanors by either emphatically concurring (23.6%) or concurring (38.9%).Similarly, Chaouachi et al. (2019) confirms the outcomes that positive impact of skepticism on saw misdirection in advertising. In this way, the more the purchaser will in general speculate the veracity of the ad, the more he will pass judgment on it to be untruthful and deceptive. Majid&laroche (2019) uncovered that, after some time, the individuals who are most suspicious of advertising had more prominent goals to buy on the web and lower expectations to buy in physical stores. they exhibited another view that suspicion on online advancements posted by publicist are more than the shopper who have effectively utilized that item and after that offer his experience by advancing that item on the web. Jamil (2019) analyzed the presence of skepticism in various online advertising formats and he found that advertising based on emotional appeals show less advertising skepticism than others. Skepticism was also less affective in advertising in which entertainment content was utilized to grab the attention of viewers. It means emotional and entertainment based advertisements are more effective than others. And they could lower the impact of skepticism. Opposite to this he also proved that advertising contains laudatory expression or tag line (Puffery advertisement) was highly affected by skepticism.

3. MAIN FOCUS

Hypotheses

- There is a relationship between gender and skepticism.
  - H0: There is no relationship between gender and skepticism.
  - H1: There is relationship between gender and skepticism.
- Education level influences skepticism.
  - H0: Education level has no influence on skepticism.
  - H1: Education level has influence on skepticism.
- Age influences skepticism.
  - H0: Age has no influence on skepticism.
  - H1: Age influence skepticism.
- Profession influences skepticism.
  - H0: Profession has no influence skepticism.
  - H1: Profession has influence skepticism.

4. METHODOLOGY

The 9 items of Obermiller&SpangenbergLikert Skep-scale were used to assess skepticism in the analysis. In this study, primary data were used. Data from India were collected from 100 respondents. All respondents were literate and rational (adult and educated) consumers.

Cronbach alpha test was performed to verify data reliability. Alpha value was 0.904 for 9 items. After testing the reliability of the data, the Pearson correlation

coefficient test was performed to determine the level of significance of the relationship between the variables.

Sample Profile: Total of 100 subjects completed the questionnaire. Among them, 60 were male respondent and 40 were female, about 28% of them having age group of 18-29 year old. And 66% respondents were belonging to age group of 30-39 and remaining 6% were out of 40-50 age groups.

Table1: Profile of Respondents

Age Group		Frequency	Percent	Gender	Frequency	Percent
Valid	18-29	28	28	Male	60	60
	30-39	66	66	Female	40	40
	40-50	6	6	Total	100	
	Total	100	100.0			100.0

5. SOLUTIONS AND RECOMMENDATIONS

Hypothesis 1: There is no uniformity of skepticism within gender in independent t test p value found >0.5 so we do not reject the H0: male and female have same level of skepticism. We found in our study that there is no significant difference between consumers skepticism towards Green Advertising within gender.

Table2: Independent Samples T- Test

	t	Sig (2 - tailed)
Equal variances assumed	.840	.402
Equal variances not assumed	.945	.346

Hypothesis 2: Education level influences skepticism.
Since p value is <0.05 so we reject the null hypothesis (H0), i.e., education has no influence on skepticism. So education influences the skepticism over web Green Advertising.

Hypothesis 3: Age influences skepticism.
Since p value is >0.05 so we do not reject the null hypothesis (H0), i.e., Age has no influence on skepticism. So we accept that age do not influences the skepticism over web Green Advertising.

Hypothesis 4: Profession influences skepticism.
Since p value is >0.05 so we reject the null hypothesis (H0), i.e., Profession has no influence on skepticism. So we believe that profession influences the skepticism over web Green Advertising.

Table3: Correlation between Skepticism and Other Factors

Correlations					
		Skepticism	Age	Education	Profession
Skepticism	Pearson Correlation	1	.122	.165*	-.150*
	Sig. (2-tailed)		.068	.013	.024
	N	100	100	100	100
Age	Pearson Correlation	.122	1	.414**	.275**
	Sig. (2-tailed)	.068		.000	.000
	N	100	100	100	100
Education	Pearson Correlation	.165*	.414**	1	.494**
	Sig. (2-tailed)	.013	.000		.000
	N	100	100	100	100
Profession	Pearson Correlation	-.150*	.275**	.494**	1
	Sig. (2-tailed)	.024	.000	.000	
	N	100	100	100	100
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

The present investigation represents the impact of buyer's statistic profile on shopper's Skepticism towards Green Advertising on internet. In the main finding, the outcomes show that effect of skepticism towards internet advertisements is not significantly distinctive among male and female buyers. From table 4 it is confirmed that education level of purchaser and his occupation differently affect the skepticism over internet. Education level shows a positive relationship and occupation shows a negative relationship. It may be the reason that with the increase in knowledge consumers level of doubt or distrust increase due to which consumers become, more skeptic of Green Advertising. While in our last finding professional persons are found to be fewer skeptics than other individuals.

Service employed person are tend to be more skeptic than any other category of employment.

6. CONCLUSION

Marketers should be concerned about how consumers perceive the company's product being advertised on internet because it is evidenced that there is a presence of skepticism in consumer's behavior towards internet advertisements. Marketers may consider different appeal or method for educated customers, since they have the ability to understand the markers tactics and therefore they show higher distrust in online Green Advertising. Marketers may also design their Green Advertising according to targeted customers' job profile since it is evidenced that different person employed in different profession show different level of skepticism.

7. FUTURE RESEARCH DIRECTIONS

Future research should concentrate on further explaining the procedure through which Green Advertising messages impact customer trust. Also, some consideration ought to be committed to a more noteworthy sample size and customer's loyalty and its impact on skepticism towards advertisements. This examination did exclude the sort of Green Advertising, so future research ought to incorporate the kinds of Green Advertising and various internet platforms available for advertisements and their effect on buyer skepticism towards advertisements. For instance, instructive Green Advertising, inspirational Green Advertising, sexual substance Green Advertising and clever Green Advertisings and their effect on customer doubt towards advertisement.

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Digitization of Payments: A Stepping Stone Towards A Financially Inclusive India

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ABSTRACT

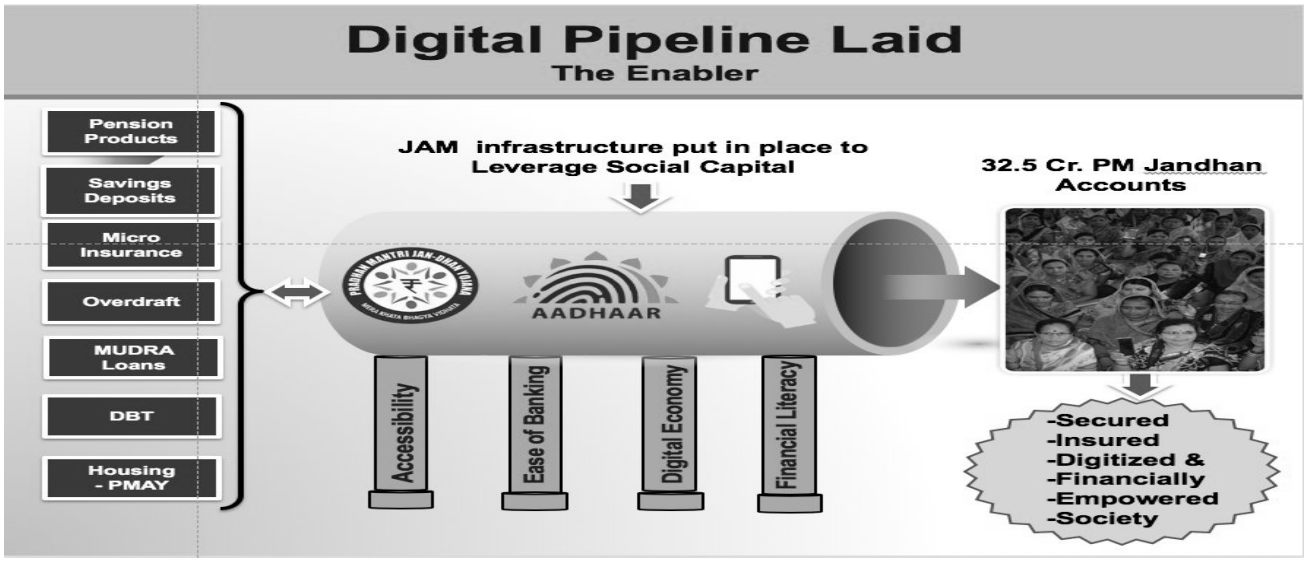
The word financial inclusion was introduced the first time, in, the Indian context by Y. Venugopal Reddy, the then RBI governor in 2005. The essence of Financial Inclusion is to ensure universal access to financial services such as deposits, fund transfer services, loans, insurance, payment services, etc. by vulnerable groups at an affordable cost. Financial Inclusion is an approach for developing people economically and financially. As per the reports, the Digital India initiative, payments banks, and small finance banks have all helped improve the reach of formal financial services to economically disadvantaged sections of the populace and geographically remote regions. Digitalization is fundamental to boost up the speed of financial inclusion. Digitization has the potential to be a great equalizer– it enables to reach the most people possible and the people who need that support most. This study addresses the impact of digital finance on financial inclusion and financial stability.

Keywords: Financial Inclusion, Digitalization, Digital Finance, Financial Stability.

1. INTRODUCTION

Digitization or Digitalisation is the need of the contemporary era. Every sector of the economy is influenced by digital waves and the financial service sector is no exception to it. This journey was not easy in the early 2000s, New technologies were adopted by the financial institutions and financial intermediaries slowly and gradually. Before 2008 concept of financial inclusion was just a blueprint. In 2008 after the recommendation of the RANGRAJAN committee, the banking industry took a turn towards connecting the masses and vulnerable groups who are unable to access the financial services and getting exploited by moneylenders. India has the second-largest unbanked population in the world with more than half of its population considered as financially excluded or underserved (World Bank, 2017).

Financial inclusion is viewed as a vital method for reducing destitution and advancing anation's more extensive monetary improvement.(Buckley & Malady, 2015). Various committees were formed for financial inclusion khan commission, nachiketmor committee, and Deepak mohanti committee with the main objective of using technology in the accelerating speed of financial inclusion. Achieving financial inclusion requires bridging the gap between cash and digital payments (Dayadhar, 2015). It is necessary to have a measure of financial inclusion because the assessment is the subsidiary of measurement.



Source: Annual Report on Financial inclusion.

If you can't measure it, you can't manage it. (Peter Drucker, Management Guru)

RBI has worked out an Index on financial inclusion (IFI) based on three variables (Chattopadhyay, 2011):

- Penetration (number of adults having a bank account)
- Availability of banking services (number of bank branches per 1000 population)
- Usage (measured as outstanding credit and deposit)

As financial inclusion also measured by the rate of change in the usage of financial services. Usage dimensions characterized by the number of people having bank accountsand availing deposit and credit facilities.The number of customers availing internet banking services and the number of customers availing mobile (Flora JorPriya.G et al, 2015). Banking services are also an important aspect while measuring usage. The primary driver of financial inclusion is the PradhanMantri Jan-DhanYojana (PMJDY)—launched in August 2014—with 31 crore deposit accounts opened under its auspices as on February 14, 2018 (CRISILInclusix report, 2018).The initial phase of PMJDY involved taking universal access to banking facilities in all the areas; then followed the phase of accessing credit, pension, and insurance services. (Bon.pe, 2019)

According to The Economist Intelligence Unit's 2019 Global Microscope on Financial Inclusion report, the overall environment for financial inclusion has improved globally with India, Colombia, Peru, Uruguay, and Mexico have the most favorable conditions for inclusive finance. ("Economic India Times", 2019)

Within the overall framework for promoting digital financial inclusion, the report identified four basic enablers - allowing non-banks to issue e-money, the presence of financial service agents, proportionate customer due diligence and effective financial consumer protection. AndIndia is well equipped with all these parameters.("Economic India Times", 2019)

2015 is considered the Game changer year with respect to the digital revolution in the country. PMJDY not only helped increase the number of bank accounts but also reduced account dormancy. FII research found that 21 percent of bank account holders in 2016, or 13 percent of adults overall, reported opening an account under PMJDY. PMJDY initiative helped drive an increase in bank account registration which led to greater financial inclusion over the last few years, particularly among traditionally marginalized groups – those below the poverty line, rural residents, and women. (finclusion, 2016)

Despite the achievements, it is clear that the usage of digital financial services is not expanding at the same rate as bank accounts are opening or smartphones are penetrating new populations. In order to better understand these trends in the high-level data, it is valuable to dig into micro-level evidence of how and why people are using or not using digital finance products. One of the key use cases of digital finance is digital payments. Thanks to the success of Paytm and others, digital payments have been major news in India since 2014 and are likely to play an important role in bringing the next generation of digital finance customers on board. To better understand the role of digital payments in digital financial inclusion, USAID supported the "Beyond Cash" study47 in 2015, which posited that "promoting digital payments is critical to achieving meaningful financial inclusion". (M star India digital financial inclusion report)

2. REVIEW OF LITERATURE

Deepti, N. S.,Vaidhyasubramaniam, S. (2018) in their paper focused on the computation of multidimensional financial inclusion with the help of quantification of dimensions availability, penetration and usage of banking services in the country. This study showed that with the increase in the dimensions availability, penetration and usage of banking services index of financial inclusion has increased.

Kaur, G. (2015) in his paper examined the effect of the digital India initiative on the conception of financial inclusion. This study concluded that Financial inclusion is not a one-time effort, Slowly but surely banking services will reach to the masses with the advent of digitalization.

Durai, T.,Stella,G. (2019) analyzed the impact of digital finance on financial inclusion with the help of one way ANOVA and concluded that mobile banking, internet banking, mobile wallets, credit card, and debit card have a significant impact on financial inclusion.

Ozili, P. K.(2018) in his study discussed digital finance with the assessment of its impact on financial inclusion and financial system stability. This study summarized that Digital finance through Fintech providers has positive effects on financial inclusion in emerging and advanced economies and the often more valuable and convenient for individuals with low and variable income than the higher cost they will pay to obtain such services from conventional regulated banks. This article also highlighted some challenges to digital finance.

Jain, P. (2019) through her study tried to observe the potential factors of mobile banking adoption which provide a comprehensive understanding of their impacts toward the adoption of mobile banking applications. In this study Diffusion of innovation used as a base-line theory to investigate factors that may influence mobile banking adoption and use.This study concluded that it is easy to change people's behavior if they are convinced mobile banking is easy to use, clear, and useful to them then it will create greater financial inclusion for the under banked consumers with greater access to the benefits of traditional banking institutions and lower-cost alternative financial services are expected to enable digital financial inclusion.

Joshi, T., Gupta, S., Rangaswamy, N. (2019) proposed to study and explain everyday practices and implications of the digital wallet, PayTM, in urban India as an instrument of financial inclusion. This paper concluded that the process of 'inclusion' is as much a bottom-up process even

if engineered top-down via national and state-driven economic policy. Digital literacy and financial literacy, the bedrock of financial inclusion, is an acquired habit borne from everyday practice and assemblage of experiences impacting consequences for the underserved and marginalized populations.

3. OBJECTIVES

This study is conducted to know the implications of the digitization of the payment system on financial inclusion and financial stability. Digitization of payment implies using digital modes of payment like internet banking, mobile banking, m-wallets (Paytm, phone pay, Google pay, Amazon pay, BHIM, etc.), credit card and debit card.

4. SCOPE OF THE STUDY

The financial inclusion index of a country depicts the true picture of the country's population, how many are financially included and what percent of the total population of country accessing financial services of the economy and contributing to the financial stability of a nation. As per various studies, it is found that financial inclusion and financial stability are complementary to each other.The digital revolution in the country evolves the concept of digitization of payments. This study is conducted to assess the relationship between financial inclusion and digitization of payments.

5. RESEARCH METHODOLOGY

This study is based on the secondary data collected from research papers, newspaper articles, websites, and published reports of RBI, from the period 2011- Jan 2020. For analyzing the trends in the usage of digital finance data were collected from the reports of NPCI(National Payment Corporation of India).

6. DATA ANALYSIS AND DISCUSSION

Promotion of digital payments throughout the period from March 2014 to Jan 2020 (chart 1)

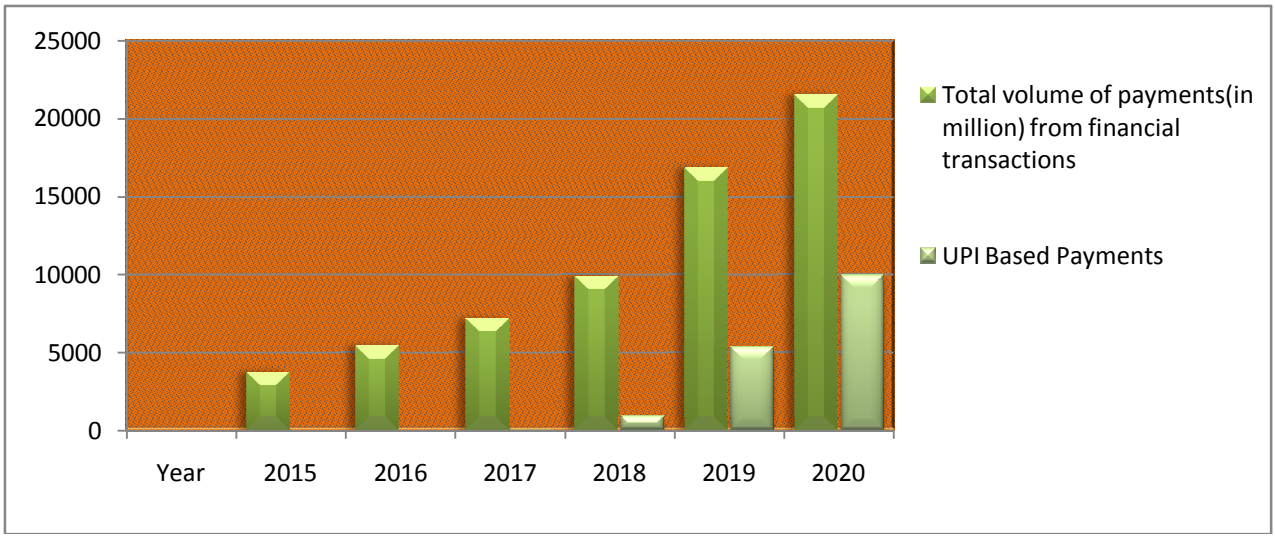


Chart 1 depicted that the total volume of payments has an increasing trend over the period from April 2015 to January 2020. At the beginning of the financial year 2015, 2016, 2017, 2018, 2019 and at end of January 2020 total volume of payments from financial transactions were respectively as 3709.46 million, 5406.41 million, 7138.40 million, 9857.60 million, 16806.25 million, 21494.71 million.

Table 1: The volume of UPI payments from April 2016 to Jan 2020

Year	UPI PAYMENTS (Value in millions)		
	BHIM	USSD 2.0	UPI excluding BHIM and USSD 2.0
2016-17	6.19	0.77	10.24
2017-18	87.91	2.21	825.12
2018-19	186.78	1.51	5165.11
April2019-Jan2020	165.58	0.87	9779.62(Continue)

The volume of UPI payments is represented through table 1.Total volume of UPI payments in year 2016-2017, 2017-2018, 2018-2019, 2019-2020 were respectively 17.86 million, 915.23 million, 5353.40 million, 9946.08 million. There was a rapid increase in the year 2017-2018. UPI payments increased up to 51.235 times of earlier UPI payments. In the year 2018-19 Per cent increase in the UPI payment was approximately 485% in comparison to the previous year. These changes are much bigger but smaller in comparison to the change which hit the scale of digitalization in 2019-20, UPI payments Percent increase by 857.9%.

Table 2: The volume of payments through the modes of Internet banking

Year	(Value in millions)	
	IMPS	NACH
2014-15	78.44	324.63
2015-16	220.81	1392.79
2016-17	506.84	1968.03
2017-18	1009.84	2375.33
2018-19	1752.91	2861.38
April2019-Jan2020	2114.55	2836.57 (continue)

Table 2 denoted the volume of payments over the years with the means of Internet banking. There was a 181.502% increase in payments making through IMPS in the year 2015-16. In 2016-2017 this change reduced and there was only a 129.53% increase in payments. This trend of increase in payments with the diminishing rate continues up to the end of January 2020.

7. FINDINGS

For the analysis of financial inclusion index, Crisilinclusix Index launched in 2013 by CRISIL and inaugurated by the then finance minister P Chidambaram, is considered.It was analyzed to know the trend in the deposit penetration and the data were obtained to know the level of financial inclusion

For the fiscal year 2016, the financial inclusion score of India, according to CRISIL Inclusix 2018, was 58.0, on a scale of 100. While in the fiscal year 2013 it was only 50.1. In2016 63% of adults, in 2017 78%adults were financially included and in 2018 this data raised up to 81%.only.Among this only, 75 % of adults are digitally included. (Finclusion.org) .

Rate of financial inclusion index is increasing over the year with the digitization of payments and the advent of Fintech companies

8. ROLE OF GOVERNMENT INITIATIVE TOWARDS DIGITIZATION

The government of India with its flagship program Digital India is also taking various steps for transforming the Indian economy with the help of the digital revolution in the country. Under this umbrella program various initiatives are taken by the government of India. Some of them which are related to this study are:

- Aadhar Enabled Payment System (AEPS)
- DigiDhanAbhiyaan
- Paygov India
- PradhanMantri Jan DhanYojana (PMJDY)
- Bharat Interface For Money (BHIM)

9. SCOPE OF FURTHER STUDY

This study is limited to assess the impression of digitization of payments, related to usage penetration (one of the important dimensions of financial inclusion index measure).Various other measures can be analyzed to know the influence of each dimension. Moreover, a study can also be conducted specificallyin a state or region as per the objective of the research.

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Sector Wide Approaches in Agriculture: A Study on the Initiatives Taken By Nabard for Agricultural and Rural Development

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ABSTRACT

Sector wide approaches in the rural and agricultural development sectors have gained much importance. In most of the countries the sector wide approaches have always been a prime contributor that has made recent advancements in many of the sectors. As per the Census report of 2011 the Registrar General of India and Census Commissioner C Chandramouli quoted that still 31.16% of population resides in the rural areas. Rural sectors contribute a major role in the development of these sectors. And therefore an enhancement in the rural sector has become an integral part of societal development as well. To add upon NABARD (National Bank for Agriculture and Rural Development) has a major source of funding towards this sector. NABARD promotes sustainable development through its various roles as in Self Help groups, Direct financing, Refinancing, Supervising and to finance those institutions that run the agriculture courses only. As per the recent data available, NABARD has refinanced many short and long term loans. To add on NABARD has sanctioned an amount of Rs 7329.43 crore in the year 2017-18 to National Rural Infrastructure Development Agency (NRIDA). The financial aid was provided for PradhanMantriAwaasYojana- Grameen (PMAY-G) and this aims to provide pucca house, with basic facilities to all those who had no home to live in or lived in kuccha houses. To ensure proper development in the agriculture sectors NABARD initiated Kisan Credit Card Scheme in association with RBI to provide crop loans to the farmers. The main objective of this paper is to focus on the ways that NABARD focuses and fosters the rural development thus promoting sector wide approaches in the agriculture sector.

Keywords: Development, Rural Population, NABARD, Agriculture.

1. INTRODUCTION

The characteristics of Indian Economy distinguish the economy of India in two different points of view. The first view of critics laidtheir focus onto India as underdeveloped economy and the other set of critics laid their focus onto India as rapidly emerging economy. It is said that agriculture plays a very vital role in Indian Economy.

The predominance of agriculture is now once again required for the need of an hour. National Bank For Agriculture & Rural Development (NABARD) is an apex banking institution that takes into consideration the entire agricultural units.

2. INTRODUCTION TO NABARD

It was quite clear that the importance of boosting up of rural economy was of utmost importance. Therefore Reserve Bank Of India with government of India constituted a committee to review the arrangements for Institutional credit and Agricultural and Rural Development (CRAFICARD) to have a check on the critical steps. Considering these aspects the committee was formed on 30th March 1979 under the chairmanship of B. Sivaraman. After the committee's evaluation report submitted on 28 November 1979, the report outlined the urgent need of a new organizational device and pointed certain issues linked with rural development.

It recommended the formation of a new financial institution and therefore NABARD came into existence in the year 1982. NABARAD initially focused only on the agricultural sector but now it has come forward with the development of the rural sector as well. Most of the irrigation facilities have been started to help the agricultural sector progress on an efficient note as well.

3. OBJECTIVE OF THE STUDY

The main objective of the study is to identify the methods of agricultural enhancement and the techniques that could come forward to enhance the sector wide approaches in agriculture. It is believed that agriculture plays a vital role. And to initiate those activities NABARD has come forward with its several initiatives to help this sector. The study focuses on the institutions set up with affiliation to NABARD and thus agriculture sectors gets enhanced.

NABARD focused This study also focuses on the SHGs (Self Help Groups) to enhance the refinance facilities as well.The study also focused on the certain missions set by NABARD to help the agricultural sector thus contributing a higher sector of development towards the global society.

4. RESEARCH METHOD

'Sector wide approaches in agriculture- a study on the initiatives taken by NABARD for agricultural and rural development' research basically focuses on the steps taken by NABARD for the development of the rural sector. Since this is a report based upon secondary data so exploratory research design is used in this research.

5. RESEARCH PROBLEM

Source:*https://www.google.com/url?sa=i&url=https%3A%2F%2Feconomicsconcepts.com%2Fnurkse%27s_model_of_vicious_circle_of_poverty_(vcp).htm&psig=AOvVaw0qiUk6srZc9aLs0-nm8YEG&ust=1583131245422000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLDKj9LV-OcCFQAAAAAdAAAAABAD*

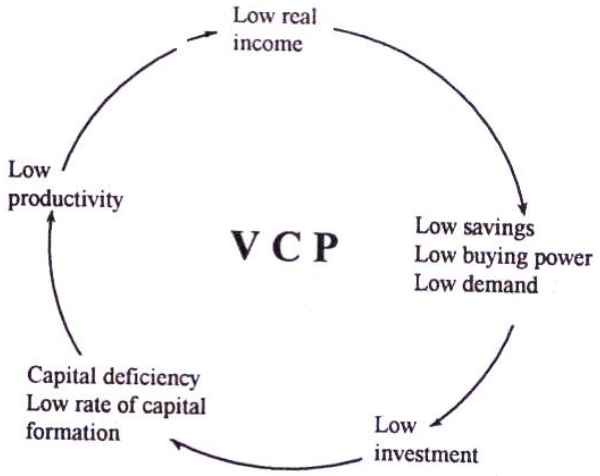

Fig 1: Economic vicious cycle

With the increasing population, the per capita income distribution is getting adverse. The knowledge of resources is limited but the wants are unlimited. The increasing population is not ready to accept the new technologies and as a result India is still a developing economy. If we come into controlling population it may be too late to take India to a new platform. Therefore government of India is focusing onto those technologies that could increase the per capita income and increase so called investment and production techniques. This is termed as economic vicious cycle. The main problem is to identify those techniques that could enhance the productivity of the economy and could make India self-reliant. NABARD came forward with certain initiatives that could enhance the agricultural productivity thus enhancing the employment opportunities and maximum production.

6. INITIATIVES TAKEN BY NABARD FOR AGRICULTURAL AND RURAL DEVELOPMENT

The state of Indian economy in the year 2018-2019 recorded a growth rate of 6.8% that moderated from 7.2% of the previous year. It was said that this moderation was a result of inactiveness of the agriculture sector and allied sector. The other factors included communication, hotels, transport etc. It was the need of an hour to give Indian Economy a trajectory to have its efficiency. Many reforms were taken such as inclusion of Goods and service tax (GST), monetary policy framework targeting inflation and so on.

Oriented towards sustainable development, Government of India has been implementing certain plans and programs and NABARD had been active partner there. They are as follows:-

- **Enhancing Agricultural Productivity:**The monsoon has always been a major factor to determine agricultural productivity. As per the monsoon reports(June-September 2018) rainfall as a whole was 91% of the Long Period Average(LPA), stating that there was less than normal rainfall but the situation of drought did not occur. And therefore it was the need to enhance agricultural productivity.
- **Rural Infrastructure Development Fund:** Rural infrastructure means the development of the rural sector. Since NABARD is realted entirely with the agricultural sector so rural development is its responsibility. In the year 2017-2018 the fund raised for this purpose was Rs 24,993 crores. With the upcoming year the fund reached an amount of Rs. 27,623 crores.
- **Long Term Irrigation Fund:** Long term irrigation fund means the fund that is allocated for the long term irrigation purposes. Before the framing of the planning commission of India no due advantages were given towards the agriculture sector. But 11th five year plan focused towards the irrigation facilities. In the year 2017-18 the long term irrigation fund was Rs 11,360 crores and by the next year it was supposed to be 13,802 crores.
- **PMAY-G (Rural Housing):** In the year 2017-18 the budget allocated to the rural housing was Rs. 7329 crores and by the year 2018-19 the credit support reached to Rs 10,679 crores.
- **PM Kisan Samman Nidhi Yojana:** To ensure the structured income support for those poor land holders, Government of India announced this scheme.Under this scheme, farmers having up to 2 ha will get ₹6,000 per year directly in their accounts in three different equal installments of ₹2,000 each. The initiative initially aimed to benefit 12 crore small and marginal farmers, at an estimated cost of ₹75,000 crore annually. It was subsequently extended to benefit 14.5 crore farmers with an estimated annual expenditure of ₹87,217 crores.
- **IOT Driven Agriculture and Value Chain Operations:** This technology is highly applicable onto horticulture, agriculture, dairy, food processing etc. The IOT Driven technology is excelling very well in U.S. And U.S is leading in this technology. The IOT Device installations in agriculture in U.S have been expected to grow from 30 million in 2015 to 75 million by 2020. It is also expected that this initiative will prove beneficial towards Indian agriculture growth as well.
- **Satsure:**It is a data analytics company that integrates satellite images,weather forecasts with the agricultural sectors to help farmers with financial security.
- **Radio Monsoon:** Radio Monsoon focuses to ensure the safety among fishermen in the southern portion of India.

- **KrishiSuchak:** It's a whatsapp like app developed by a Bangalore based start upNubesol technologies to enable the small holders to reach out to the agriculture scientist for any advice.
- **Development of Mechanisms for Monitoring and Reporting:** It was an urgent need to develop a mechanism that could come forward for monitoring all the factors related with agriculture and should generate a report onto it that could help in analysis of the entire agricultural sector. Therefore it was the need for an hour to come up with a mechanism to monitor and generate reports based on agriculture.
- **Umbrella Programme for National Resource Management:** It's a unique product that finances loans and grant support to community based natural resource management. NABARD sanctioned ₹109 lakh as loan support and ₹15.44 lakh as grant support towards the project. As a result the milk production enhanced and scientific management was provided on feeding of cows, artificial insemination etc.

7. CONCLUSION

As per the discussions in the entire paper the main objective of the paper was to discuss the initiatives taken by NABARD for the agricultural and rural infrastructure development which could lead onto the rural sector development .The bullet points of the entire research are as follows:

- Improved coordination and planning
- Public expenditure management and service delivery
- Public private sector interface
- Improved watershed development
- Umbrella programme
- Refinancing
- Self help groups
- Institutional development
- Supervision
- Supporting rural cooperative credit structure
- Promotion of food processing industry
- Pradhanmantriyojna
- Irrigation fund
- Credit facilities
- Dairy processing
- Fisheries development
- Tribal sector development
- Mobile based app
- Complaints management portal
- Krishaksamriddhi

8. LIMITATIONS TO THE STUDY

The limitations of the study include the following:

- **Insignificant Government Ownership:** This means that the government ownership distribution is not proper as compared to the other countries.
- **Potential in the Sector Wise Approaches Loose Their Focus at Certain Times:** At times the SWAPs have the capability to focus on all the agriculture and rural requirements but there are certain times where the proper focus is not given to these sectors and thus the SWAPs are not given proper attention.
- **High Cost of the Projects:** Sometimes the projects cost too much that it becomes impossible for the government to implement it.

9. SUGGESTIONS TO THE STUDY

The suggestions to the study include the following aspects:

- The ownership distribution should be significant enough.
- The government should make distributions in such a way that focus towards any sector is not lost.
- The projects should be made with less cost and higher output ratio.

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Social Media: Free and Forced Approach for Promotion

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ABSTRACT

E. Jerome McCarthy has given 4P's of Marketing, which are Product, Price, Place and Promotion. Gradually it became 7 then 9 and 11 and may be in future it will include more P's in world of marketing. All the P's of Marketing has gone through various changes but P for Promotion had a paradigm shift. The traditional techniques of promotion for a product and services was print media, radio, TV etc. These were commonly used by the companies before the digital era.But these techniques were not very cost effective and also time consuming.

In digital media there are various type of sources which are used for promotion by the companies. These sources are direct messages, emails, web, and now most common social media. Among these most frequently used platform for promotion is social media (Facebook, Instagram, Twitter, Snapchat, LinkedIn), with its unique feature of free and forced watch .This paper will focus on the feature of free and forced watch along with the popularity of social media and also its flaws.

Keywords: Marketing, Promotion, Social Media Marketing (SMM), Free and Forced.

1. INTRODUCTION

In today's world of digitalization the most commonly used platform for sharing information, getting information and communication is Social media.

"Social media refers to websites and applications that are designed to allow people to share content quickly, efficiently, and in real-time. Many people define social media as apps on their smart phone or tablet, but the truth is, this communication tool started with computers. This misconception stems from the fact that most social media users access their tools via apps." (Matthew hudson) Another definition of social media refers to "Internet-based applications built on Web 2.0, while Web 2.0 refers to a concept as well as a platform for harnessing collective intelligence" (Huang &Benyoucef, 2013 p. 246). Social media, such as Facebook, Twitter, and LinkedIn, provide people with a pervasive network connectivity (Asur&Huberman, 2010).The term "Web 2.0" refers to the set of technologies and ideologies that enable and drive media rich content creation on the internet (Kaplan &Haenlein, 2010).Web 2.0 provides the open source ideology to the users, whereby they can freely use the tools and techniques and share information with each other.

Social media provides the platform to share photos, videos, personal opinions, events, incidents etc. in real time. The gap between sender and receiver has been reduced with the help of social media. It is like fitting the whole World in one small box. But First we need to understand that using social media is a different thing and marketing on social media is completely different. For example a teenager might know that how to use Facebook or Instagram but this doesn't mean that he or she also knows the social media marketing. Thus being on social media and social media marketing and entirely two different things. Further not only Big business but Small businesses are also using social networking as a promotional activity etensively. Businesses canfollow specific people to use social networking sites locally and advertise specifically for contracts. This can be special and in such a way that you "get a free drink with a copy of this twitter". This edition the message encourages other locals to follow the business on the sites to find out promotional agreement. Through this process, the business is transparent and self-motivated.India's digital population is growing fast. Technology advancement has created and all set to supply the web services in low-cost rates which is further motivating peoples to use the services frequently and at a regular basis. Ever decreasing prices of computers, mobile phones and tablets have provided a medium for web surfers to get on the net and connected to friends and families.

The top 5 Social media platforms which are widely being used both for personal and professional reasons are Facebook, Instagram, Twitter, Snapchat etc.

2. LITERATURE REVIEW

1. Mangold&Faulds (2009) in their study purported social media as a new hybrid element of promotion mix. They strongly put forward that modern marketing should include social media as a promotional tool when crafting and implementing their Integrated Marketing Communication strategies. As Social media tools reaches a large mass of audience, the managers must take into consideration consumer discussions in a manner that is relied with the organization's mission and performance goals. They have also highlighted on the methods that can be used to accomplish this viz., providing the customers with good networking platforms, promotional tools to engage customers, etc.

2. R.A.Gbadeyan (2010) study examined that there are

opportunities for businesses in the market, businesses can grow with the help of social media marketing. Uses of SNS explored that organization can do direct marketing for online social network there are people who spend more time on SNS. Study also finds the reasons for people were using social networking sites due to safety concerned reason, technically inexperience due to lack of confidence in using internet, intellectual rejecters who feel waste of time.

3. Greer & Ferguson (2011) studied the use of twitter for promotion and branding using a content analysis. They used a tactical and strategic model of media promotion to examine the Twitter sites of 488 local television stations in the United States. One finding of their study was that news stories were the most commonly occurring items on the sites and also found that, however, stations that offered news items also seldom promoted their regular newscasts. However, other items in this category such as contest promos, breaking news, or invitations for user interaction did not occur many a times. They conclude their study by saying that overall, stations did not come out to use Twitter to direct viewers to the station's on-air programming.

4. In another study by Bajpai et al.(2012) social media marketing: strategies and its impact highlights on the various social media marketing strategies for small businesses that can take this viral marketing form beyond the present social media to build the community powerful enough to make an initiative buying and marketing effective. They also compare it with the implications of traditional means of marketing.

5.The study made by Bhagwat and Goutam (2013) is in line with the study done by Jati and Mohanty (2012) where they assert the need for social networking sites in a business. They highlight that social technology is connecting people in ways to share information and other things to each other. From their study they found Facebook to be the leading Social media networking site. They have also provided with statistical data which shows that social media sites are growing and providing facilities to both business organizations and the people. Their reputation in short time is in lieu of their requirement in society for communication and also for business as well.

6. Likewise, Kumar and Singh (2013) makes the case that how social media as a marketing communication tool helps in building brand equity and customer relationship. In their study they have examined the strategy "Live the moment" used in social media campaign by Maruti Suzuki for its Ritz car to creating awareness and preference for its car. They found that using social media strategy used became a most successful campaign by the company and was capable of building a strong brand and strengthen its customer relationship through social media network. This tool not only stimulated the interest among its online fans community it also increased the awareness of other stakeholders.

7. Priti S. et al (2013) studied the effectiveness of placing brand communication on social networking sites which shows that there is effect of online comments and reviews of products/brands on the buying behavior of consumers. Study revealed that people do come across various advertisements on social networking sites also prefer to go through the online comments and reviews regarding the brand/products before buying the products for them brand communication on social networking sites plays important role to influence buying behaviour of the customers.

8. Alina-Daniela Mihalcea et al (2013) studied that extensive use of SNS such as Facebook, Twitter and LinkedIn has laid the possibility of using new platforms in order to generate more business revenue. It was demonstrated that social networking becomes profitable for companies in terms of brand exposure, brand awareness and actual sales. Study explored the social media characteristics and their impact on business also provides guidelines for companies to decide about implementation of Social Networking Sites (SNS) in three aspects like: Product development, marketing communication and recruiting. Key findings of the research is in case of product development companies can monitor Social Networking Sites to obtain data for their products/services and can talk to consumer through content to build new, improved offers that better resonate with the buyers. For marketing communication demographic and behavioural data provided for creating targeted messages, but company should consider the negative online word of mouth dispersion possibilities and create a strategies accordingly. While recruiting, offers for employers a better understanding of their potential candidates, Professional profiles on LinkedIn or adding personal information from Facebook or Twitter accounts.

9. VinodWaiker (2014), the study covered the social media impact on non-buying behaviour like opinions and brand promotions. To understand the relationship between branding of products on social media and its impact on sales of the company has been studied opinions like depth of knowledge about products, exposure in market, doubt solving, resolve queries and doubts, shape the attitude for buying the products, promptness in decision for purchase of products etc. study concluded that users have strong sentiments involves at the time of purchase of products, at the time of exchanging information. Sale of company's products is related with social media marketing.

10. V.G. Jisha (2014), study indicates that how students were using social Networking Sites for career development with effectiveness of advertisements on students perceptions. The study benefited to students that they listed top technology skills, followed by creativity, being open to new or different views and communication skills. The study includes Social Networking Site like Facebook, Twitter, LinkedIn, Orkut, Badoo etc. were used by students, will be helpful for to know the usage level, advertising, career helpfulness for students. The aim of the study was revealing the mysteries that why students

concentrate more on Social Networking Sites with reason was more on for their livelihood and also acts as a sustaining tool for college students in their job opportunities.

3. OBJECTIVES

The paper is based on secondary data which is gathered from the published reports of ITU, journals, websites, and many others. The study was planned with the following objectives:

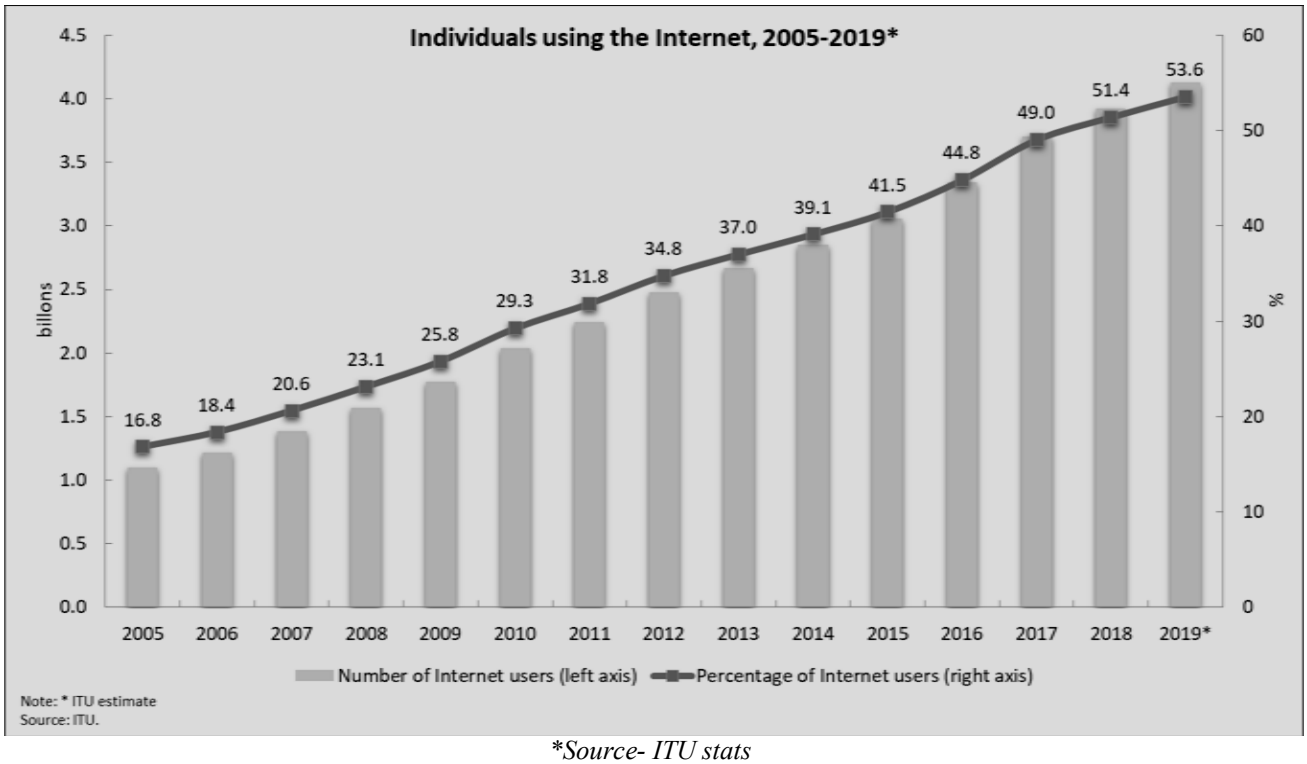
- To analyze the extensive use of social media for promotion.
- To evaluate the effectiveness of the social media promotion on consumers.
- To analyze the change in use of social media platforms for various purposes.
- To examine the need of social media marketing in business.

There are some reasons for choosing the social media platforms for promotional use by the organizations nowadays.

1. Large number of persons: There are large number of persons present on social media for personal and professional role and they are keep on switching their roles as marketer, customer and consumer.

ITU (International Telecommunication Union) Report

ITU's Measuring Digital Development series of statistical and analytical publications that replace the annual Measuring the Information Society Report. Facts and figures 2019 offers a snapshot of the most important ICT indicators, including estimates for the current year. Latest figures show that while Internet use continues to spread, the digital gender gap is also growing.



**Source- ITU stats*

2. Cost effective tool: Out of all the 5 "M" which are Man, Method, Material, Machinery and Money. Last is one of the most important for judgment and social media is very cost effective as it use very limited resources to reach an extensive audience.

3. Customer engagement: Social media is a good way to engage and interact with customers. The more you interact with the audience, the more chances you have of conversion. Set up two-way communication with your target audience so that their wants and interests are easily met. Furthermore, communication and engagement with customers is one way to get their attention and convey your brand message to them. Therefore, your brand will reach a wider audience in real terms and settle down with no hassle.

4. Healthier customer satisfaction: Social media plays a very important role in social media and communications. With the help of these platforms, creating a voice for your company is crucial to improving your overall brand image. Customers love the fact that when they comment on your page, they receive a customized response instead of an electronic message. The kind of product that impresses its consumers, it takes time to compose a human message, which is seen naturally in a positive light.

5. Availability: According to the survey, internet users spent average 2 hours 22 minutes on social media per day. In this involvement with social media at time during their

personal time engaging in shopping, with shopping, fulfilling their personal role and this gives very strong base to impulsive and unplanned buying which is the jackpot for the marketer.

7. Awareness: With the help of social media platforms the people get to know about new products or new brands in the market. Most of the people using social media for keeping themselves updated with the market trends and events.

8. Social Messages: In recent years social media has also become a platform to inform the peoples for incident and many social awareness campaigns by NGO. People are using hasthtags for starting a campaign on social media For example #Endacidsale.

9. Brand alternatives: Social media provides the facility of choosing the best brand from the variety of brands that might be known by your or might not be. When you are scrolling to search for a specific brand but it provides you various more brand suggestion which are related to that and sometime the people switch to that brand.

4. CONCLUSION

Social media can be a powerful tool for promotion of any organization's products or services. It can increase your visibility, strengthen relationships, establish a two-way communication with customers, provide a forum for feedback, and improve the organization's reputation. For these reasons, social media websites have become an important part of organizations. Since organizations are "focused on effectively networking forums, there are a few critical things to keep in mind" (Chaturvedi, n.d., para. 1). Organizations must first develop a comprehensive media communication strategy and include best practices for implementing that strategy. Following this guide can help an organization more effectively and achieve maximum benefit from their social media activity.

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Social Media: Virtual Family Away From Family

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ABSTRACT

The family in Indian society ,is an institution by itself which has woven a rich social fabric consisting of culture and traditions .Over the centuries the role played by the joint family system in India has nurtured and preserved cultural and social values .The values of tolerance,patience,acceptance and empathy imbibed by the Indian family system move from generation to generation .Family values play an important role in shaping the outlook of people . The tradition Indian family has proved itself to be a perennial source of healing and social cohesion. Societies evolve with time and one of the most significant changes witnessed by the Indian society are the disintegration of family and the rise of nuclear and virtual families. The vast expansion of internet and social media has gained momentum over the years sand is rapidly becoming a replacement for building and establishing connections in the real world .Social media has bought forward a huge change in how people treat relationships It has been witnessed that the real world interactions and experiences are being sacrificed leading to creation of a virtual family which is giving people an illusion of real connections and relationships. People have adopted the perspective that virtual families can be substitutes for the so very vital real world connections. Indian society is sacrificing conversation for mere online connection.

Keywords: Social Media, Virtual Family, India, Family.

1. INTRODUCTION

Indian culture has absorbed and amalgamated many different customs and ideas throughout its long history which has led to a rich tradition andculture. the concept of a family life is inherited directly from their background in India, where entire families share the same home for generations, are deeply invested in one another's lives, and reinforce their connection to one another through a whole range of traditions and ritualsThebeauty of the rich and varied culture of India lies in the spirit of tolerance, harmony, brotherhood.

People eat different foods, practice different religions speak different languages but are united in diversity .Festivals and gatherings are never limited to a family or home but witness whole hearted zeal and kinship.

Social media is a technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities.social mediagives users quick electronic communication of content. Content includes personal information, documents, videos, and photos. Users engage with social media via computer, tablet or smartphone via web-based software or web application, often utilizing it for messaging.

Social media and networking is fundamentally shifting the way we interact, communicate, organize, form opinions, andshop. Social media has blurredboundaries,, increased transparency and created fluidity in everything around us. Growing rapidly, companies, large and small, can no longer ignore or try to block social networking in their environment

Social media helpsus to connect with our friends and family. Over the years numerouslost family members and contactshave reunited by connecting through social media. It has also given an opportunityto unprivileged and talented people to showcase their talents with the help of social media. It helps people across the globe by sharing vast information very quickly and easily, as many social media sites provide the facility of creating groups communicating with the help of them and staying connected with each other

Social media can at the same timehave catastrophic effects on human beings as social creatures if it is used to replace rather than enhance byprovoking a false sense of connection. It also brings aboutpsychological changes onhow people approach relationships, and elicitnegative emotional responses to such sort of communications. Checking in via text or social media with friends and family can be great.

Technology is amazingly helpfulfor helping us keep in touch, butdue to its excessive usepeople aremissing out on genuine real-life connections. People and relationships have become less approachable due to the creation of this virtual family.

People have made a perceptionthat theironline means of connectionsmade through Instagram, Facebook, Twitter, WhatsApp etc. can be substitutes for the real life connections.

2. LITERATURE REVIEW

Lindsay H Shaw, Larry m Gant (2004): The research examines the effect of the use of Internet on the user's psychological health. Earlier the use ofinternet was positively correlated with depression, loneliness and stress but the study found out that it was found to decrease depression and stress significantly while perceived social support and self esteem significantly

Rajendra k Sharma (2004): The book highlights the nature and features of Indian society and the changes that have taken place in various social institutions during different historical phases.

Subrahmanyam K (2008): It studies that over the past decade ,.technology has become indispensable in the lives of adolescents. The author demonstrates that online content can itself be both positive and negative.

Arnold Brown (2011): The research paper focuses on the shift of peoples perception regarding the virtual world as a place where they can establishand maintain safer and less demanding relationships on their own time. It also deeply analyzes the Indian society wherecentury long arranged marriage culture was replaced by online matrimony and matchmaking websites

Richard L Gilbert, Nora A Murphy, M Avalos (2011): studied lifeand real life relationships and indicated that their virtual relationshipserved as an emotional competitor or potential threat to their real life relationship with potential detrimental effectsrising due to virtual relationships.

Nancy k Baym (2015): This study examined the disruption of relationships by the internet and the mobile phone which has led to a rise in anxiety and hope among people. Nancy Baym provides frameworks for thinking critically about the roles of digital media in personal relationships.

Debra Quackenbush, Jon G Allen, J Christopher Fowler (2015): The o of this study was to study the burgeoning of online social networks which raise questions about the quality and value of interpersonal relationships

Sherry Turkle (2015): Sherry Turkle has been exploring the effects of digital worlds on human behavior. She has explored the damaging consequences of digital media. She exclaims "I am not anti-technology, I am pro conversation"

Phil Longstreet, Stoney Bro (2017): The research aimed at the internet and social media addictions which continueto grow as our dependence on technology increases. It estimated that around 210 million people around the world suffer from internet and social media addiction.

OfirTurel, Damien Brevers, Antoine Bechara (2018): Studies the growing concern over addictiveness of social media use. It examines the existence of time distortion during social ,media use.

3. OBJECTIVES

The paper is based on secondary datawhich is gathered from published reports, websites, journals and many others. The study was planned with the following objectives

- To analyze the extensive use of social media for creating connections.
- To analyze the impact of loosening real world connections
- To analyze the creation of a virtual family due to the growing digitization
- To study the impact of virtual family onIndiansociety.

Digital technology hasevolved at an alarming rate. Billions of people around the world are flocking to social networking sites in hopes of creating online connections .Face to face interactions are becomingthe third method of communication behind text messaging and IM messaging in just a matter of a few years (Rosen).

The desire, accessibility, and interest in these digital connections have put the most fundamental type of communication, face to face interaction, in its shadow. It is almost disturbing that humans can abandon such a vital form of our social makeup without thinking twice. We want to have social interactions, but we don't want to go through the trials and tribulations of real world interactions.

Social media is on the verge ofbecoming a replacement for building and establishing connections in the real world and there is plentywrong with this mentality as it hasstructurally impaired real world connections and relationships. Social media has had a dampening and hollowing effect on Indian family culture as well with time. Direct interaction hasbecomeless prevalent, anda false sense of connection hastaken over onhow we approach people.Technology hastriggered negative emotional responses brought on by social media leading to ill effects on our relationships. Instagram has recently made the decision to remove likes visible on some posts. In an interview with Bloomberg News, Instagram boss Adam Mosseri said, "The idea is to try and reduce anxiety and social comparisons, specifically with an eye towards young people."

4. CONCLUSION

If social media isused in the rightway ithas great potential to inspire and connect people, as itevolves, it will becomeeasier and better to choose the platforms that can fetch usreal human connections and the sense of belongingnessthat people crave for .Real world connection arehaving someoneupon whom one can rely upon ; knowing thatyou have someone to share your feelings with to be ableto talk to; feeling that make you feel treasured ; and coming acrossas your real self .

Real connections are built over time, by empathy, acceptance, mutual understanding andgenerosity. Humans need real worldconnections with others to exist. As Dr. Brene Brown of the University of Houston explains, "We are psychologically, emotionally, cognitively, and spiritually hard-wired for connection, love, and belonging. Connection, along with love and belonging (two expressions of connection), is why we are here, and it is

what gives purpose and meaning to our lives."

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