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Message from the Chancellor

The Symbiosis International University always practices and preaches the concept, ‘World is One Family’ – ‘Vasudhaiva Kutumbakam’. It always promotes friendship, co-operation and understanding between foreign and Indian students. Symbiosis today is the premiere educational institute of Pune and a brand equity in providing quality management education.

The different institutes that come under the umbrella of Symbiosis International University are the agents of change which contributes to the symbiotic growth of the University.

I would like to congratulate the entire team of SCMS on the launch of their fourth Journal – “*Annual Research Journal of SCMS–Pune*”. Research gives birth to new knowledge and answers a lot of existing questions. Such initiatives are a plethora of knowledge and contribute to the prevalent research culture in the university.

This initiative taken by SCMS Pune will take it forward by leaps and bounds on the path of recognition and reputation. I wish them good luck and success in all their endeavors.

Prof. Dr. S.B. Mujumdar
Founder & President, Symbiosis,
Chancellor, Symbiosis International University

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Profile of the Vice Chancellor

Dr. Rajani Gupte is the Vice Chancellor of the Symbiosis International University. A distinguished academic, she received her Doctorate degree in Economics from the prestigious Gokhale Institute of Economics and Politics, Pune. She has been actively engaged with higher education for over thirty years, both as a professor and researcher. She has taught at many foreign universities as well, including the Oakland University, Michigan US, and Bremen University for Applied Sciences, Germany.

She has been a part of the leadership team at Symbiosis for over two decades. She joined Symbiosis as a founding member of the Symbiosis Institute of International Business in 1992. She was the Director of the Institute between 2004 and 2012. Her headship led the Institute to be established as one of the top-ranking business schools in India. A capable institution-builder, Dr. Gupte has also earlier held the positions of Dean-Faculty of Management, Dean-Academics and Pro-Vice Chancellor at the Symbiosis International University.

She is an independent Director on the Boards of several ET 500 companies and has been frequently invited on committees of important organizations, such as International Trade Panel - Confederation of Indian Industries (CII), World Trade Organization Committee, Govt. of Maharashtra, and Chemtech World Expo. She has also served on committees appointed by the UGC and on working groups on higher education.

Dr. Gupte has been awarded for her outstanding contribution to Education by Lokmat National Education Leadership Awards 2015 and the "Swayamsidha Puraskar 2015" by Lions Club of Pune Elite .

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Profile of the Principal Director

Dr. Vidya Yeravdekar is the Principal Director of Symbiosis Society, which encompasses the Symbiosis schools and institutions under the Symbiosis International University. A dream of her father, Dr. S .B Mujumdar of creating 'a home away from home ' for international students, Symbiosis today , has transformed itself into a multi-disciplinary, multinational, multi-cultural International University having students from all states of India and international students from 85 different countries. The University has institutes under 7 faculties viz. Management, Law, Humanities & Social Sciences, Health & Biomedical Sciences, Computer Studies, Engineering, Media Communication & Design.

Dr. Vidya holds a Post Graduate Degree in Medicine, a degree in Law and is a Ph.D. in 'Internationalisation of Higher Education in India’. To promote international understanding through quality education, she has brought in innovative approaches at Symbiosis International University through international collaborations with some of the top Universities in the world.

Dr. Vidya has been able to influence policy regulations for promoting and bringing in innovative approaches to higher education in India through her appointments on various governmental bodies. She has been a member of University Grants Commission and Central Advisory Board of Education (CABE). She is a member of the Governing Board of several organisations like Indian Council for Cultural Relations, Indian Institute of Mass Communication, Indian Institute of Corporate Affairs, Swarnim Gujarat Sports University, Yeshwantrao Chavan Maharashtra Open University. She is a Member of the State Knowledge Advisory Board of Higher Education, Government of Andhra Pradesh and Member of the Task Team of Arts Management Strategy for Karnataka. She is a member of many corporate bodies such as Mahratta Chamber of Commerce & Industries, Federation of Indian Chambers of Commerce & Industry (FICCI), Confederation of India Industry (CII), and Not for profit organisations like HK Firodiya Foundation, India International Centre (IIC), Pune International Centre (PIC) & Pune Citizens Police Foundation.

She has presented papers at various National & International Conferences and has numerous research publications to her credit. Dr.Vidya’s hard work has won her numerous awards and accolades and she is now focussed on making Symbiosis International University benchmarked amongst one of the best Universities in Asia.

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From the Director's Desk

It gives me great pleasure to present the Fourth volume of Annual Research Journal of SCMS, Pune.

The theme for the journal this time is 'Sustainability, Management and Best Practices'. Sustainable development by definition defines a development that satisfies the need of people in the present in a manner that future generation also reaps the benefits of the same. Sustainability challenges faced by business enterprises usually relate to ecology, social and economic.

This journal is an attempt to contribute towards building academic knowledge base by compilation of well researched, peer reviewed articles. The articles are well articulated and substantive.

I also extend my gratitude to all authors, editors and reviewers who have provided support at all stages. I also welcome suggestions that would help us improve the quality of our Journal.

Dr. Adya Sharma
Director,
SCMS, Pune

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From the Editorial Team

Wishing Our Readers, Authors and Reviewers A Very Happy New Year

In the VUCA world that we live today, competitive advantage and capabilities gained by institutions are temporary and hence a constant improvement in their business strategy is mandated for sustainable growth. Moreover it is necessary for firms to embrace a sustainable approach towards attaining inclusive growth and better penetration. In pursuance of the above SCMS Pune is coming out with its Fourth Annual Journal focusing on the theme **Sustainability, Management and Best practices.**

Financial inclusion is on the priority of banking today and the government is also taking various initiatives to increase its reach. ***Prabhakar Nandru, Byram Anand and Satyanarayana Rentala*** explored the factors influencing financial inclusion and supported it with evidence from South India.

Mrs. N. Uma Devi and Dr. C. Vijayakumar studied the impact of Morale on Organisational Commitment using the Structural Equation Modelling (SEM). ***Punit Kumar Mishra and Rahul Pratyush Mohanty*** tried to measure the annual carbon footprint, when vegetables and grains travel from farms to consumers so that measures could be taken to reduce it.

Varun Rajan in his article studied the emerging significance of sustainability accounting and reporting and how has it come to its present form.

Arpita Chakraborty, Manvendra Pratap Singh and Dr. Mousumi Roy studied the barriers in restructuring university curriculum for a sustainable future and presented solutions to overcome them.

Sushil Mavale and Sonica Rautela studied the innovations done in restaurant businesses across the world and how could it help the growth of local businesses .***K. Selvakumar and Dr. S.Thangaraju*** studied the constraints in tourism development for a Cultural Heritage Destination with respect to Karnataka state and how it could be improved. ***Yogesh Pisolkar and Navendu Chaudhary*** highlighted the problems of Coastal Tourism, Environment and Local Sustainable Development along the Sindhudurg district of coastal Maharashtra and suggested some site specific solutions to tackle them.

NPAs is becoming very important in the present banking environment**.** ***Vivek Rajbahadur Singh*** studied the Non-Performing Assets (NPAs) of Commercial Banks, their status and

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trends, factors contributing to them, reasons for their high impact on scheduled commercial banks in India and the recovery of NPAS through various channels.

Sharmiladevi in her study reviewed FDI in India and economic growth and tried to explain how it could led to sustainable development. ***Anupa Godse and Soma Kulshrethra*** talked about various accounting practices that could lead to sustainable development.

Dhiraj Jain & Yuvraj Sharma talked how adoption of cloud ERP could significantly affect business and enhanced efficiency. ***Joel John*** studied how Bitcoins could help those unbanked who lie at the bottom of the pyramid.

Dr. Azra Ishrat in her case study talked about employee privacy and issues relating to invading it.

We thank all the authors for their significant contributions and hope to continue association in future. We thank all the faculty members and staff of SCMS, Pune for their support extended whenever needed. We also invite critical suggestions to further enhance the quality of our Journal.

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Exploring the factors impacting financial inclusion: Evidence from South India

Prabhakar Nandru[1], Byram Anand[2] and Satyanarayan Rentala[3]

Abstract

Achieving 100% financial inclusion is the main agenda of any successful government. Accordingly, Indian economic reforms show significant impact on the financial inclusion programme. Financial inclusion is the core agenda of the central banks, government and financial policymakers. The World Bank working paper published in 2012 indicated that 65% of adults in India which has a population of over 1.23 billion have no access to bank account. The World Bank also declared financial inclusion as one of the objectives of achieving universal financial access by 2020. Recently the government of india (GOI) has stated the national programme on financial inclusion, the "PradhanMantri Jan DhanYojana (PMJDY)". The objective of PMJDY is to bring the households into the formal banking system by providing them basic bank accounts, issuing the debit cards and provide accidental insurance coverage. This is evidence that financial inclusion has been recognised as a fundamental tool for inclusive economic growth and poverty alleviation. The present study is based on secondary data of various states of south India from 2010-2012 through Reserve Bank of India, Hand book of Statistics on the India Economy. The present study is based on exploring the factors that impact on financial inclusion. The study highlights that size of population, gender ratio, branch penetration and credit to deposit penetration ratio have a significant impact on enhancing financial inclusion programme in south Indian states.

Keywords: Economic reforms, literacy rate, branch penetration, gender ratio, credit penetration, deposit penetration, financial inclusion.

JEL Code: G2 & G21

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Exploring the factors impacting financial inclusion: Evidence from South India

1. Introduction

Worldwide, 50 percent of adult population is isolated from formal banking services. The account penetration is almost nearly universal in high-income economies, with 89 percent of adult population reporting that they have an account at a formal financial institution. But it is only 41 percent in rising economies. Worldwide, more than 2.5 billion adults do not have formal bank account. Most of them belong to developing countries only and the difference in account ownership by individual distinctiveness is particularly large in developing countries. From a gender point of view 46 percent of men have formal bank account as compared to 37 percent of women (*Demirguc-Kunt, A and Klapper, L 2012*).

In case of India, 65 percent of adults had no access to a bank account and are hence unable to use financial services. In the present economic scenario, the issues relating to financial inclusion are of growing interest and one of the major socioeconomic challenges for policy makers, researchers, central banks, financial institutions and successive governments.

The World Bank's objective of achieving universal financial access by 2020 is an additional evidence to prove that financial inclusion had been recognised as essential for economic development and poverty alleviation. This is important because diverse theories and empirical support have shown that financial inclusion can have direct or indirect impact on poverty diminution mainly in two ways. It has an indirect influence through positive impact on growth and secondly, it has a direct impact if it causes reformation of the financial system in a way that widely increases access to financial services or makes credit accessible to the poor.

The Indian banking sector has shown unbelievable growth in volume and complication during the last few decades. Despite making significant growth in all the areas relating to financial capability, effectiveness and competitiveness, there are so many issues that banks have not been capable to include huge segment of the adult population, mostly the underprivileged segments of the society, into the fold of essential banking services. Globally also efforts are being made to study the causes of financial exclusion and designing strategies for providing guarantee financial inclusion of the poor and underprivileged. The reasons may differ from country to country and therefore the strategy could also be different but all out efforts are being made as financial inclusion can really boost the financial situation and living standards of the poor and the underprivileged (*(Leeladhar.V,2005*).

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The government of India (GOI), Reserve Bank of India (RBI) and financial institutions have been taking proactive actions for providing formal banking services to vast section of people in India. Recently the government of India (GOI), has launched the 'Pradhan Mantri Jan DhanYojana' (PMJDY), with a purpose of removing financial untouchability and providing universal access to banking services with at least one necessary banking account for every family, financial literacy, right to use to credit, insurance and pension by providing formal banking services to the poor. The scheme has some determined targets, such as to provide a bank account to every household within 12 months. Every household person opening an account would also be given individual accident insurance of Rs. 1,00,000/- as well as life insurance of Rs.30,000 (and an overdraft facility of Rs. 5,000 after six months of opening of the bank account).

The scheme was launched on 28th August, 2014 with 1.5 crore new accounts being opened on a single day. Initially, the government set a target to open bank accounts for 7.5 core households by 26th January, 2015. But nearly 8.0 crore accounts have been opened by October, 2014 and the government changed that target to 10.0 crore bank accounts by 26th January, 2015. As against the target of 10.0 crore, PMJDY scheme was successful in creating 12.5 crore bank accounts by 31st January, 2015. The number of bank accounts opened through PMJDY initiative had crossed the 20.0 crore mark by 20th January, 2016 as can be observed from Table1.

Table 1: Status of PMJDY Scheme on 20th January, 2016 (figures in crores)

Financial Institution	Rural	Urban	Total	% of Zero-balance Accounts
Public Sector Bank	8.91	7.10	16.01	31.78
Regional Rural Bank	3.12	0.51	3.63	26.24
Private Banks	0.45	0.30	0.74	39.80
Total	12.47	7.91	20.38	31.09

Source: (http://www.pmjdy.gov.in/account; accessed on 24th January, 2016)

2. Financial Inclusion

Financial inclusion is delivery of banking services at a reasonable cost to the huge sections of underprivileged and low income groups. It ensures that a range of proper financial services are available to every individual and that the individual understands and accesses those services.

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This includes a basic, no-frills banking account for making and receiving payments, a savings product appropriate to the cash flows to poor households, money transfer facilities, small amount of loans and overdrafts, and insurance (life and non-life) facilities.

Definition of Financial Inclusion

A. **In 2008**, a committee on financial inclusion headed by **Dr C Rangarajan** defined financial inclusion as, "The 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".

B. **Prof Raghuram Rajan's** committee on financial sector reforms defined financial inclusion as, "Expanding access to financial services, such as payment services, savings products, insurance products, and inflation protected pensions".

C. **CRISIL** defines financial inclusion as "The extent of access by all sections of society to formal financial services, such as credit, deposit, insurance, and pension services".

The role of sound financial system depends on access to reasonable rate of financial services, mainly credit and insurance services, which help to boost livelihood opportunities and empowers the poor to take charge of their lives. Such empowerment helps social and political constancy. Apart from these benefits, financial inclusion imparts formal uniqueness and provides access to the payments system and to savings protection net like deposit insurance. Hence financial inclusion is measured to be critical for achieving comprehensive economic growth, which itself is required for ensuring largely sustainable economic growth in the country (*Thorat.U, 2007*).

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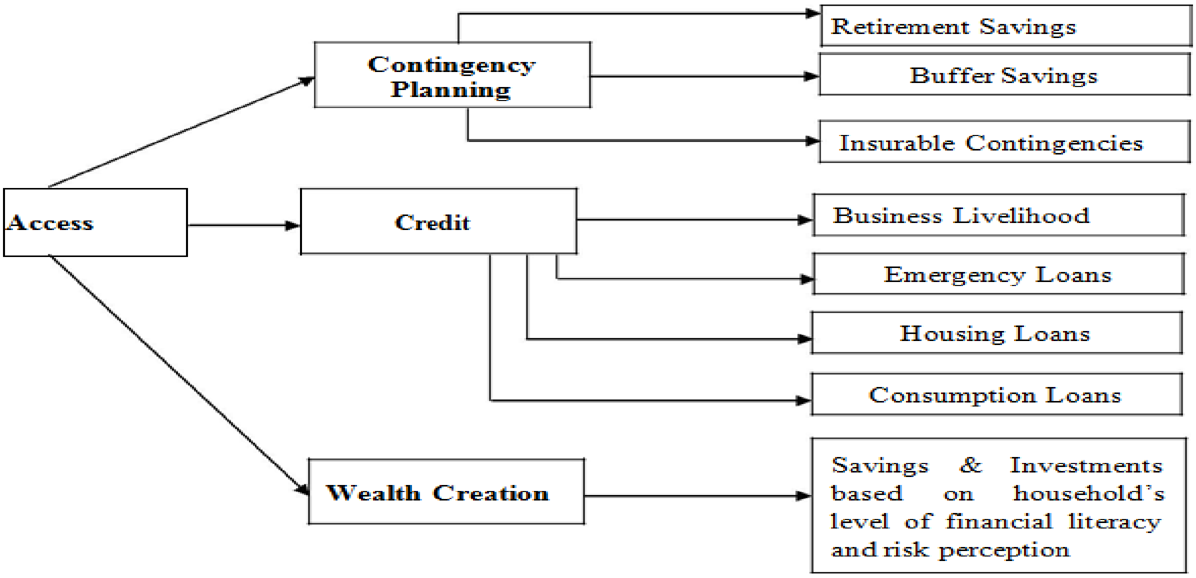
Figure 1: Household Access to Financial Services



Source: *A hundred Small Steps report of the Committee on Financial Sector Reforms*

3. Review of Literature

Bhanot et al (2012) studied the phenomenon of financial inclusion in two-states (Assam and Meghalaya) in north-east India. The authors have attempted to explore the various factors which are critical for determining financial inclusion in remote areas of India. The study concluded that financial inclusion in these remote areas of India was very low. Income levels, awareness regarding financial products through various sources, information about Self Help Groups (SHGs) and education levels of the respondents were concluded to be influential in determining financial inclusion. It was also found that nearness to financial institutions like banks and post offices increases financial inclusion. Other factors like area terrain and government support were not found to be influencing financial inclusion but government support in plain areas was found to have an influence on financial inclusion.

Gupte et al (2012) identified key factors which measure the financial inclusion index in Indian context. The authors used four critical dimensions for calculating financial inclusion index. Outreach dimension (geographic branch penetration; geographic ATM penetration; number of accounts; deposits & loans per 1000 adults), the usage dimension (volume of deposits and loans), ease of transaction dimension and cost of transaction dimension (annual fees charged to bank customer for ATM card usage or the cost included for international transfer of money) were found to be determinants of computation of financial inclusion in India. It was found that geographic branch outreach penetration and ATM penetration played an important role in enhancing financial inclusion in India context.

A study by **Kumar (2013)** examined the status of financial inclusion and provided the evidence of its determinants. The study found that branch network has a major impact on financial inclusion. Proportion of factories and employee base factors are important key determinants of penetration for financial inclusion index. It was found that a region's socio-economic and environmental association had a significant influence on shaping banking practices of masses in India. It was also found that spreading out branch net work had a considerable impact on financial inclusion.

Kohli (2013) highlighted the factors which significantly enhance financial inclusion in India. The author identified relationship between financial inclusion and levels of human development in India. Socio-economic factors, income levels among individuals were found to be influential factors on the level of financial inclusion in India. On the other hand, technology and education about the banking services were also found have a significant impact on financial inclusion in India.

Mendoza (2009) examined the factors which influenced enhancing financial inclusion outreach in state of Madhya Pradesh in India. The author has observed that micro finance was a significant tool for enhancing financial inclusion in the state of Madhya Pradesh. It was found that microfinance institutions (MFIs) and non-governmental organizations were the key factors to enhancing financial inclusion in rural areas of Madhya Pradesh.

Chakravarty and Pal (2013) concluded that geographic penetration of branch network and credit penetration were two major strategies to promote financial inclusion in India. It was found that the social-banking policy has played a vital role to promote financial inclusion across states in India during 1977-1990. Later, the move in the direction of pro-market financial sectors restructuring has adversely affected the pace of financial inclusion. It was also highlighted that India could have achieved higher level of financial inclusion during the last two decades. The level of financial inclusion was found to be significantly influenced by economic development of regions, where as agriculture and allied activities were negatively

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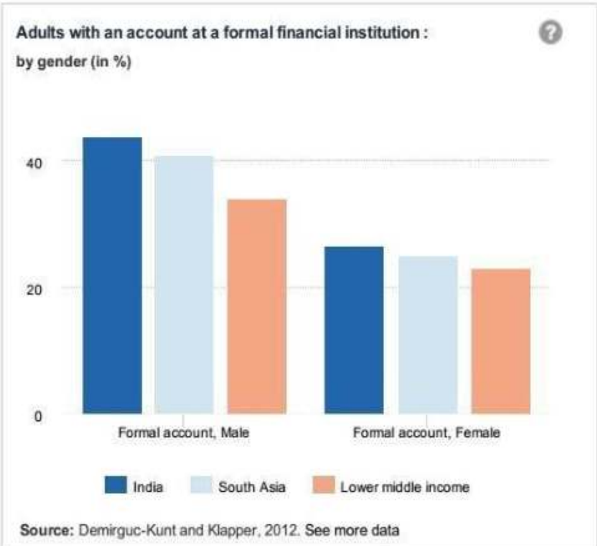
associated with financial inclusion in India.

4. Status of Financial Inclusion in India:

In India, financial inclusion is not a new dispensation. With the intention of increasing the banking services and increasing the credit, banks were nationalised in 1969. However, despite large efforts, a vast section of population (about 65 percent of adult population) has remained isolated from the advantages offered by the organised financial sector. Cognizant of the necessity for financial inclusion in India, the Reserve Bank of India (RBI) has been positive in trying to introduce multiple measures of financial inclusion into the Indian financial institutions. In 2005, RBI prepared guidelines to enhance outreach of banking services. RBI introduced Business Facilitator and Business Correspondent model (BC) with information and communication technology support.

In addition to pursuing its mission towards financial inclusion, RBI set up a committee on 'effective financial access to low income households and micro business entrepreneurs', headed by Nachiket Mor in September 2013. The committee has determined the target of providing every adult in India with access to appropriate financial services by 2016. This plan is hoped to be linked with Aadhaar card information. The committee has also recommended the setting up of 'Payment Banks', a new type of banks, dedicated to enhance financial inclusion.

Figure 2: Adult population with an account at formal financial institutions by gender ratio and literacy ratio



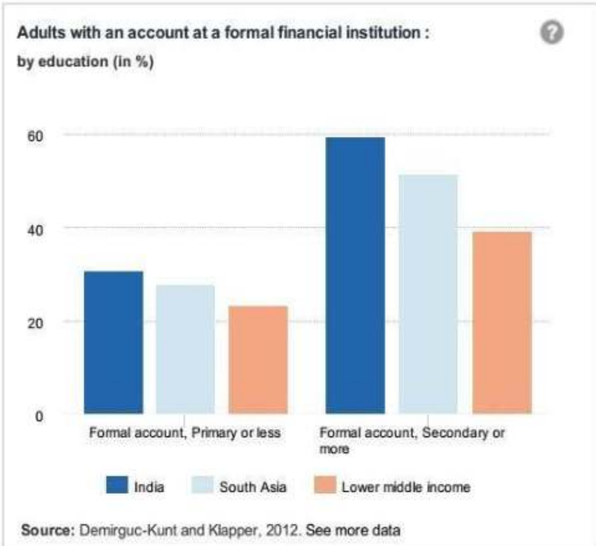


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Figure 2 indicates that the adult population that have an account at formal financial institutions. The financial inclusion status in terms of gender and literacy ratio is shown in Figure 2. It is noted that only 46 per cent male adults have bank account as against 37 per cent women population. It is very high in India in comparison to other South Asian nations. Similarly, India has a higher financial inclusion status with respect to the literary ratio indicating that higher literacy ratio leads to greater financial inclusion.

Table 2: Selected Indicators of Financial Inclusion- Cross Country Comparison

Country	**Number of Branches (per 1 lakh adults)**	**Number of ATM's (Per 1 lakh adults)**	**Bank loans as per cent of GDP**	**Bank deposit as per cent of GDP**
India	**10.64**	**8.90**	**51.75**	**68.43**
Australia	29.61	166.92	128.75	107.10
Brazil	46.15	119.63	40.28	53.26
France	41.58	109.80	42.85	34.77
Mexico	14.86	45.77	18.81	22.65
United States	35.43	-	46.83	57.78
Korea	18.80	-	90.65	80.82
Philippines	8.07	17.70	21.39	41.93

Source: Report on Trend & Progress of Banking in India, Reserve Bank of India 2011-12

Table 2 presents a summary of selected financial indicators for various important economies of the world. It is noted that in terms of branch penetration Brazil ranks the highest while India ranks as the second lowest in terms of branch penetration. India also ranks poorly in terms of ATM penetration.

5. Objectives of the Study:

The main objective of the study is to identify the determinants of financial inclusion by providing evidential support for South Indian states by using Index of Financial Inclusion (IFI).

6. Research Methodology and Data Source and Variables:

Research Methodology:

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The study uses multiple regression analysis to examine the determinants of financial inclusion for the states in South India. The regression model is shown as follows.

$$finan\_inclu = \alpha + \beta_1 POP_i + \beta_2 GR_i + \beta_3 BP_i + \beta_4 DCPR_i + \beta_5 LR_i + \varepsilon_i$$

Where finan_inclu denotes the financial inclusion as dependent variable derived from Crisil Inclusix (2013), and other explanatory variables are Population (POP), Gender Ratio (GR), Brach Penetration (BP), Deposit to Credit Penetration Ratio (DCPR) and Literacy Ratio (LR). The data has been considered from Census, 2011 data and Reserve Bank of India Statistics on the Indian Economy.

Data source: This paper used secondary data of various states in India from 2010-2012 through RBI's, Hand book of Statistics on the India Economy.

Evidential Support of Variables

Sharma (2008) attempted to study on "index of financial inclusion" and considered three basic dimensions of Index of financial inclusion for an inclusive financial system.

1) Bank Penetration (indicated by people having number of bank accounts)
2) Availability of Banking services and (indicated by the number of bank employees per customer)
3) Usage of banking system(indicated by volume of credit and deposit proportion)

Gupte et al., (2012) in their study on "Computation of financial inclusion index for India" as a geometric mean of four different dimensions.

1. The Outreach Dimension (measured by Branch penetration, ATM penetration, and number of accounts).
2. The usage Dimension (indicated by the volume of Deposits and loans as a percentage of GDP).
3. The Ease of Transactions Dimension (measured by the number of locations to open Deposit or loan accounts and affordability of deposit or loan accounts)
4. The Cost of transactions Dimension (indicated by annual fees charged to customers for ATM usage or cost of money transfer and other remittances are involved)

Arora (2012) studied on "measuring financial access" has considered three variables.

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1. Physical access or Outreach Dimension (Measured by Branch penetration and ATM penetration
2. Ease of Transaction Dimension (measured by location to open bank account, the number of documents required to open bank account)
3. Cost of transaction Dimension (measured by bank charges to customer for access banking services)

Rahman (2013) attempted to construct “Developing a financial inclusion index”. In her study considered four indicators to construct index of financial inclusion namely

1. Convenient accessibility (measured by availability of access points, such as bank branch penetration and no. of ATM’s in a given area)
2. Take- up rate of financial products (measured by the number of the adult population with a bank account over the total number of the adult population and the number of the adult population with life insurance policies)
3. Responsible usage (considered two basic banking services (deposit and credit) measured by using indicators on percentage of customers with active deposits and percentage of customers with performing financial accounts)
4. Satisfaction level (measured by the percentage of customers who are satisfied with overall financial services provided by financial institutions)

Yorulmaz (2013) studied “Construction of a regional financial inclusion index in turkey”. In this study to construct financial inclusion index he followed method suggested by Sarma (2008) and considered same three basic dimensions namely.

1. Banking penetration
2. Availability of the banking services and
3. Usage of the banking system

Crisil Inclusix (2014) an index to measure India’s progress on Financial Inclusion based on three tangible and critical dimensions.

a) Branch penetration

b) Credit penetration

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c) Deposit penetration

Demirguc-Kunt and Klapper (2012) “measuring financial inclusion” the global findex database. In this study they used four indicators for measuring financial inclusion.

1. The mechanics of the use of formal accounts (measured by frequency of use, mode of access) and the purpose of these (personal or business ,receipt of payments from work , government , or family) The account penetration (measured by individual or joint ownership of formal accounts such as a bank , credit union, co-operative , post office or micro finance institutions)The receipt of payments measure (measured by payments or money from the government and family remittances- money from family members living elsewhere)

2. Focuses on savings behaviour(measured by the use of accounts , as people often save at formal financial institutions)

3. Focuses on sources of borrowings (formal and informal);purposes of borrowing (mortgage, emergency or health purposes, and the like); and use of credit cards

4. focuses on use of insurance products for health care and agriculture

Amidzic et al, (2014) studied “assessing countries financial inclusion standing - a new composite index”. Three important indicators are used in this study.

1. The outreach dimension (measured by using geographic or demographic penetration indicators-AMT’s and branches per land mass)

2. The usage dimension (measured by the percentage of adults with at least one type of regulated deposit account and the percentage of adults with at least one type of regulated loan account)

3. The quality dimension (measured by financial literacy, disclosure requirements, dispute resolution)

4. The cost of usage dimension

Table 3 gives an overview of various variables used in the earlier studies on financial inclusion.

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Table 3: Various variables used in construction of Financial Inclusion Index by various researchers

Sr. No	Authors	Variables Used
1	Sarma (2008)	1) Bank Penetration, 2) Availability of Banking Services and 3) Usage of Banking System
2	Gupte et al., (2012)	1) The Outreach Dimension 2) The usage Dimension 3) The Ease of Transactions Dimension and 4) The Cost of transactions Dimension
3	Arora (2012)	1) Outreach Dimension 2) Ease of Transaction Dimension and 3) Cost of transaction Dimension
4	Rahman (2013)	1) Convenient accessibility 2) Take- up rate of financial products 3) Responsible usage and 4) Satisfaction level
5	Yorulmaz (2013)	1) Banking penetration 2) Availability of Banking Services and 3) Usage of Banking System
6	Crisil Inclusix (2014)	1) Branch penetration 2) Credit penetration 3) Deposit penetration
7	Demirguc-Kunt and Klapper (2012)	1) The mechanics of the use of formal accounts 2) Focuses on savings behavior 3) Focuses on sources of borrowings and 4) Focuses on use of insurance products
8	Amidzic et al, (2014)	1) The outreach dimension, 2) The usage dimension 3) The quality dimension and 4) The cost of usage dimension

Source: compiled by Authors

Financial Inclusion Index as calculated by CRISIL for different states in India was considered as the dependent variable. Based on evidence from previous studies, we consider five important determinants of financial inclusion: evidence from South Indian States.

1. Branch Penetration
2. Size of Population
3. Gender Ratio
4. Deposit to Credit Penetration Ratio
5. Literacy Rate

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7. Results and Discussion

Results from regression analysis indicate that among all the independent variables, Population size, gender ratio, branch penetration, and Deposit to credit penetration ratio show significant impact on financial inclusion for Indian states. Table 4 presents the regression results.

Table 4: Regression Results

Variable	Co-efficient	t-value	VIF
C	194.869	16.625***	
Population	0.0000	-2.170**	1.481
Gender Ratio	-140.651	-12.072***	1.178
Branch Penetration	0.032	5.129***	5.164
Deposit to Credit Penetration	1.357	3.156**	1.119
Literacy Rate	0.0000	-0.027	4.553
R^2	0.490		
Adjusted R^2	0.482		
F- value	60.553		

*Note:**** Significant at P< 0.001%; ** Significant at P<0.05% *Source: Author's calculations*

8. Conclusion

Financial inclusion has recently been recognised as an important policy option aimed at poverty alleviation, minimizing social exclusion and enhancing inclusive economic growth. Recently the government of India (GOI), has launched financial inclusion programme in the name of 'Pradhan Mantri Jan Dhan Yojana' (PMJDY), with the aim of removing financial untouchability and an intention of universal access to banking facilities with at least one basic banking account for every household. This is evidence that financial inclusion has been recognised as an important tool for inclusive growth. The main objective of this paper is determinants of financial inclusion in South Indian States. Population size, gender ratio, branch penetration, and Deposit to credit penetration ratio show significant impact on financial inclusion in South Indian states.

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A Study on Impact of Morale on Organisational Commitment, Through Structural Equation Modelling (SEM)

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Abstract

The success of any organisation lies in the hands of the employees working in it. There are two magical words which make the employees to involve and outperform in their work which are morale and commitment. The literature confirms that employees with high morale and commitment show higher productivity in their respective jobs. Morale is a moral condition with respect to cheerfulness and zeal. It is a state of mind, and an emotional attitude. Organisational commitment is work-related outcome. People who are committed are likely to stay in an organisation and work towards the organisation's goals. This paper is about a study conducted on measuring the impact of morale on organisational commitment with special reference to college teachers. From the analysis it is found out that teachers have high level of morale and organisational commitment. The overall morale is higher in Government colleges. The lowest morale is found among self-financing teachers. Further, it is found out that there is a significant difference in the level of morale among the Government, aided and self-financing teachers. The analysis of organisational commitment shows that teachers of self-financing colleges have got higher level of commitment than that of Government and aided colleges. The lowest commitment is found among the Government college teachers with the mean value 150.77 (Kruskal –Wallis One way ANOVA Test). But there is no significant difference found among the three groups of teachers in their organisational commitment. The Structural Equation Modelling (SEM) shows that 30% of Organisational Commitment is determined by morale.

Key words: Morale, Organisational Commitment, Affective Commitment, Continuance Commitment, Normative Commitment, Structural Equation Modelling, Confirmatory factor analysis.

JEL Code: G2 and G21

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Introduction:

Education plays an important role in molding professional and personal life of each person. Mahatma Gandhiji said "The purpose of education is to bring out the best in you". Swami Vivekananda defines education as 'the manifestation of the perfection already in man.' The whole process of education is shaped and molded by the teacher who plays a pivotal role in any system of education. Kothari Commission (1964-66) rightly remarked that 'of all the different factors, which influenced the quality of education, the quality, the competence, and the character of teachers are the most significant factors. Teaching is one of the noblest jobs on the earth. According to Bishay (1996), the teaching profession ranks high on the success list of a society. However, the teacher is highly qualified, experienced, satisfied with the career and talented in teaching and other academic work, unless he/she is actually involved and committed to his/her job, all the said qualification, experience and talents are a mere useless. This commitment is voluntary and natural one. It means, one cannot compel a teacher to be committed to his/her job. It should be automatically formed by both internal and external motivators. This commitment, interest towards job, aim to deliver the best, positive attitude towards job and institution is nothing but 'morale'. Organisational commitment is a multidimensional construct that has the potential to predict outcomes such as performance, turnover, absenteeism, tenure and organisational goals.

Morale and Organisational Commitment

Morale is *sa-gi*, originally from Chinese, mean soldier (sa) energy (gi). Morale is originally referred to the collective will of citizens of a nation at war to sustain fighting. Later, it was applied for sports teams, schools, and work organizations. Morale is 'a composite of feelings, attitudes, and sentiments that contribute to general feelings of satisfactions. Morale is mental attitude or bearing of a person or group as regards confidence and discipline. 'Morale' is rarely considered for research because of the conceptual problems associated with it. The concept of the term morale is elusive and complex and intangible. As the definition and the scale of measure are constantly changing, it becomes difficult to define the term morale. Bentley and

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Rempel (1980) in his book entitled Manual for the Purdue teacher opinionnaire, conceptualized morale as 'the professional interest and enthusiasm that a person displays towards the achievement of individuals and group goals in a given job situation.' Kahn and Katz (1953), in their article entitled 'Leadership Practice in Relation to Productivity and Morale', stated that "Morale is a combination of attitudes towards the company, job and the immediate supervisor." Baynes (1967) in his book entitled 'Morale: A study of men and courage' defines morale as "a quality of mind and spirit which combines courage, self- discipline, and endurance." James and Jones (1974) in his article entitled 'Organisational Climate: A Review of Theory and Research' stated that morale concerns members' affective or emotive responses to the organization, their general sense of well-being and enthusiasm for collective endeavours. Milton L.Blum in his article entitled 'Industrial Psychology and Its Social Foundations' defines morale as "the possession of a feeling on the part of the employee of being accepted and belonging to a group of employees through adherence to common goals and confidence in the desirability of these goals."

There are three approaches to morale. They are Classical, Psychological and Social. Under Classical approach morale like health and sanity, has to do with the background conditions of living. It has to do with individual effort in a group endeavour. Morale is absence of conflict and a feeling of happiness. It is a good personal adjustment and a group cohesiveness. It is a collection of job-related attitudes and ego involvement in one's job. Morale is an individual's acceptance of goals of the group. Under psychological approach, "morale is the sum total of several psychic qualities which include courage, fortitude, resolution and confidence." It is a mental condition which leads individual and groups willingly to subordinate their personal objectives temporarily and within reason, to further the company service objectives. According to Social approach, Morale is considered as a tendency of employees to work together enthusiastically for a common purpose in the industry. Morale is an index of the extent to which the individual perceives a probability of satisfying his own motives through co-operation with the group.

Organsational Commitment is positively correlated with promotion policies (Gaertner and Nollen 1989), pay (McElroy 2001), co-workers (Steers 1977), supervision (Oldham, 1976), job security (Yousef, 1998), nature of work (Okpara, 2004) working conditions (Painter and

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Akroyd 1998, and Richards, O'Brien, and Akroyd (1994) and training opportunities (Birdi, Allan, and Warr 1997 and Tannenbaum, Mathieu, Salas, and Cannon Bowers, 1991). Organisational Commitment is an individual's identification and involvement with a particular organisation. It is a strong belief in and acceptance of the organisation's goals and values; It is a willingness to exert considerable effort on behalf of the organisation and a strong desire to maintain membership in the organisation. Organisational commitment is an effective response to the whole organisation, while job satisfaction is an effective response to specific aspects of the job. According to Scarpello and Ledvinka (1987), in his book entitled 'Personnel/Human Resource Management: Environment & Functions' stated that researchers viewed organisational commitment as involving an exchange of behaviour in return for valued rewards. It is the outcome of a matching process between the individual's job-related and vocational needs and the organisation's ability to satisfy these needs.

Organizational commitment is divided into three types namely (a) Affective commitment (b) Continuance commitment and (c) Normative commitment. Affective commitment is "an individual's attitude towards the organisation, consisting of a strong belief in, and acceptance of, an organisation's goals, willingness to exert considerable effort on behalf of the organisation and a strong desire to maintain membership in the organisation" According to Meyer and Allen (1984) affective commitment as the employee's "positive feelings of identification with, attachment, and involvement in the work organisation." Affective commitment develops if employees are able to meet their expectations and fulfill their needs within the organisation." Affective commitment results in employees staying within an organisation and these employees generally act in the organisation's best interest and are less likely to leave the company.

Meyer and Allen (1984) in their article entitled 'Testing the Side-Bet Theory of Organisational Commitment: Some Methodological Considerations' stated that continuance commitment is the value that an individual invested surplus time, effort, money and would be deemed lost or worthless when he or she leaves the organisation. Normative commitment is a belief that "employees have a responsibility to their organisation". Wiener (1982) in his article entitled 'Commitment in organizations: A normative view' stated commitment as the "totality of internalised normative pressures to act in a way which meets organisational goals." Bagraim

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(2003), in his article entitled 'The nature of measurement of multiple commitment amongst South African Knowledge workers' stated that employees experience normative commitment due to their internal belief that it is their duty to do so. Sparrow and Cooper (2003) in their article entitled 'The employment relationship: Key challenges for HR' suggests that normative commitment encompasses an employee's felt obligation and responsibility towards an organisation and is based on feelings of loyalty and obligation.

Previous researches on morale and organizational commitment:

Washington and Watson (1976) in their article entitled 'Positive teacher morale' identified the following factors for high morale, eagerness to come to work and willingness to work late, support of school programs and committees through active participation, inclination to take on school tasks that are not specifically assigned to them, investment in the direction of the school policies, alignment with the philosophy of the school and pride in being an educator linked to a specific school, willingness to openly support efforts to create effective links with the school's local community.

Hunter, Ventimiglia, and Crow (1980) in their study entitled 'Faculty morale in higher education' explored that faculty members' satisfaction with teaching and working with students were the important morale factors at the university level. However, their morale was distinctly low with regard to being overworked, job stability, job promotions, non-participation in the evaluation process, and lack of support from colleagues.

Robert H.Garin and John. F.Cooper (1981) in their article entitled 'The Morale – Productivity Relationship, How Close?' reviewed the literature of the past to shed some light on relationship between morale and productivity. They had identified six possible relationships. Two of them were a) high morale linked with high level of productivity b) low morale linked with low level of productivity. A third type was that of low morale coupled with high productivity levels. It occurs when the supervisory style is heavy handed and shows little regard for the feelings of the employees. A fourth relationship was absence of relationship. Fifth type of relationship was one of high morale and low productivity. This occurs when management wants to keep the employees content at all costs and as a result productivity suffers. The sixth and final relationship was one in which an improvement in morale leads productivity and vice versa.

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Briggs (1986) in his article entitled 'High morale descriptors: Promoting a professional environment' identified the high morale descriptors, which were participation in curriculum planning, acknowledging the other teachers efforts and their ability recognition.

James and Rhonda (1996) undertook a study on the title 'A New look at Factors related to college faculty morale' at Tennessee State University. From the study, it was found that the factors which are significantly linked to the level of morale consisted of 1) faculty dissatisfaction with work load, 2) working conditions, and 3) relations between faculty and the administration. The following factors such as race, sex, academic rank, or salary have no relationship with morale.

John Pisciotta (2001) conducted a study entitled Teacher Attitudes in Texas Public and Private educational institutions. In his study, he analysed the main reasons for morale problems. 30% of the teachers of private institutions pointed to financial compensation, only 14.4% of the teachers of public institutions stated compensation as the main morale problem. More important for public institutions were treatment by administrators at 32% and student attitude and behavior at 40%. He concludes that the three important aspects in teacher morale in combating teacher shortage, are teacher pay, teacher certification and teacher satisfaction with their school environments.

Linda K. Johnsrud and Vicki J. Rosser(2002) in a study entitled faculty morale, advocated that morale is an important factor in teachers deciding whether or not to stay in the profession. When the works of the teachers improved, in turn it increases the morale of the teachers therefore increases teacher retention. They determined three dimensions that affect teacher morale: 'an engagement in work, sense of institutional regard and personal sense of their well-being' and observed that gender, race and ethnicity were not significantly related to morale. They concluded that educational institutions that wish to retain their teachers must consider the morale issues such as the need to consider professional priorities of teachers, concentration on the relationship between teachers and administration by providing support as a major emphasis and enhancement of the quality of benefits and service the teachers receive.

Maria Rafferty (2002) has correlated Teacher Morale and teacher turnover. She states the reasons why teachers choose to change schools or leave teaching completely. The reasons such

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as stress due to increased demands on time, low pay, student discipline problems, low morale levels, and lack of support from campus administration are issues that teachers are facing'.

Mackenzie (2004) in his doctoral thesis stated that there is a link between morale and status, leadership, salaries, workload, media coverage and student welfare. Buckley, Schneider, and Shang (2005) in their study using data from K-12 teachers in Washington, DC states that the quality of school facilities is the reason for teachers' decisions to leave the profession. It also discovered that teacher morale was affected by their portrayal in the mass media, attitudes of the local community, and various government policies.

P. Kannadas (2006) in his research entitled 'Morale among teachers of Government aided and Self-financing colleges in Madurai region, Tamil Nadu' has found out that there exists significant difference in the level of morale between both the groups and self-financing college teachers have higher morale and they give priority for monetary benefits and scope for career advancement. Government aided college teachers give high priority for research, training and development and conducive work environment. Further, the finding shows that there is a positive relationship existing between organizational climates with morale.

Vitalis Margaret Chinyeremma Chigbu (2006) has conducted a study on Morale and Motivation of Teachers of Nigeria and stated that teachers do not feel respected enough by the government, parents or society as a whole and suggests that a well planned professional development, heightened society's estimation of the teachers' professional worth and continuous reappraisal and improvement of teachers' welfare will enhance morale.

Hassan Danaee Fard et.al. (2010) in their article on 'Employees Morale in Public Sector: Is Organizational Trust an Important Factor?' have found out a high correlation between organizational morale and organizational trust by 0.71. Punia (2000) studied commitment among University teachers on two dimensions organizational commitment and job commitment. He found that University teachers were more committed towards their job as compared to their organization.

Maheswari (2003) explored the ways and means of enhancing commitment. Study was conducted on 400 secondary school teachers which revealed that healthy school environment

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enhances commitment among teachers.

Bogler & Somech (2004) examined the distinctive relationship of teachers' professional and organizational commitment with participation in decision making and with organizational citizenship behaviour. It was inferred that participation in managerial domain was positively associated with both the professional and organizational commitment, whereas; participation in the technical domain was positively related to teachers' professional commitment only.

The research conducted by Stephanie Litton Potter (2012) entitled 'Relationships between Educators' Organizational Commitment, Job Satisfaction, and Administrators' Gender' indicated that there is no significant association between the administrators' gender and teachers' job satisfaction and their organizational commitment.

Sombat Tayraukham (2012) has studied the influence of school climate, job satisfaction and organizational citizenship behavior on teaching commitment in his study entitled 'Causal Factors Influencing to Teaching Commitment: Northeast Thailand'. It is found out that the variable that carried the direct effect to teaching commitment, at .01 statistical significance, was organizational citizenship behavior and the variables that took the indirect influence to teaching commitment at .01 statistical significance were job satisfaction and school climate. All variables could explain the variance of the teaching commitment at 64.90 percent.

Research Methods:

The study was conducted among the college teachers who were divided into three strata namely, Government, aided and self financing college teachers and a sample of teachers selected at random. The sample size was 320. The data were fed into SPSS and analysed using statistical tools such as mean, standard deviation and Kruskal –Wallis One way ANOVA Test or H Test and Structural Equation Modelling (SEM).

Measurement of Morale and Organisational Commitment:

Morale is measured through a questionnaire developed for this study based on previous inventories. Organisational Commitment is measured through a structured questionnaire. The details of the basic inventories used for instrumentation is shown in table – 1.

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Table 1: Inventories used for developing Research Instrument

Variable	Basic Inventories used for instrumentation
Teacher Morale	1. *The Purdue Teacher Opinionaire (PTO, Bentley & Rempel, 1980) 2. Morale Dimensions, Robert J. Coughlan 3. Self-Efficacy Assessment Instrument developed by Angelo & Cross, (1993) and adapted by Nestor Dominic St. Charles
Organisational Commitment	**Organizational Commitment Questionnaire (OCQ, Meyer & Allen 1997)

*The PTO measures 10 dimensions of teacher morale with a total of 100 items measured on a 4-point Likert-type scale from 1 (disagree) to 4 (agree). The 10 dimensions include: Teacher Rapport with Principal, Satisfaction with Teaching, Rapport among Teachers, Teacher Salary, Teacher Load, Curriculum Issues, Teacher Status, Community Support of Education, School Facilities and Services, and Community Pressures.

** Meyer & Allen (1984) initially proposed making distinctions between two types of commitment: affective commitment and continuance commitment. Allen & Meyer (1990) subsequently introduced a third component of commitment, normative commitment.

While the earlier versions (Meyer & Allen, 1984, 1991; Allen & Meyer, 1990) of the OCQ contained 24 items (8 items for each scale), the later version by Meyer, Allen, & Smith (1993) and Meyer & Allen (1997) only contained 18 items (6 items for each scale).

Reliability:

The reliability coefficient of the subscales for the instrument was computed by using Cronbach's alpha on the data collected through pilot study. For Organisational Commitment Questionnaire, although Allen and Meyer (1990) have reported acceptable reliability for each subscale, the researcher ran the Cronbach's alpha because of possible cultural differences. The overall reliability for the questionnaires measuring morale and organisational commitment are 0.838 and 0.792 respectively.

Results and Discussion:

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From the results shown in table 2, it is found out that there is a high level of morale among the teachers of colleges. The mean value is 3.4719 (which is above 3).

Table – 2: Overall level of Morale

Variable	Number of respondents	Minimum	Maximum	Mean	Standard Deviation
Morale	320	2.57	4.26	3.4719	.24639

This finding is supported by the finding of Asad Hasiri et.al., (2010), in which the organizational morale mean value arrived at 3.02 has reported high level of morale among the respondents.

Overall level of Organisational Commitment:

The overall level of organisational commitment of teachers is also high. It is inferred from the mean value 3.4863 (which is also above 3) shown in table 3. This finding is supported by the previous study of Aamir Ali Chughtai & Sohail Zafar (2006), in which he has reported a moderately high level of Organisational commitment among the study participants.

Table – 3: Overall level of Organisational Commitment

Variable	Number of respondents	Minimum	Maximum	Mean	Std. Deviation
Organisational Commitment	320	2.00	5.00	3.4863	.48567

Out of the three types of commitment, normative commitment is found highest with the mean value of 3.70. Affective commitment is the second highest with the mean value of 3.47 and the third highest is continuance commitment with the mean value of 3.29. This finding is supported by the study conducted by Ian Howard Frederick Bull (2005) in which he has reported that normative commitment is the highest and the second mean value is obtained by affective commitment and the third is continuance commitment.

The teachers are classified, according to the types of institutions, as teachers of Government, aided and self financing colleges. Their level of morale and organisational commitment is shown in table 4.

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Table – 4: Level of Morale and Organizational Commitment according to institutions

	Number of Respondents	Mean Rank	
		Overall Morale	Overall Commitment
Government college	30	177.88	150.77
Aided college	142	177.82	156.14
Self-finance college	148	140.35	166.66
Asymptotic Significance Value		.001	.520

Source: primary data

With the help of Kruskal-Wallis test, the overall level of morale and organisational commitment of Government, Aided and Self Financing teachers is analysed and compared. As per the results of the table –4, in case of morale, the mean rank is the highest (177.88) for Government college teachers. Hence, it is clear that the overall morale is higher in Government colleges than the aided and self-financing colleges. The second highest mean rank is obtained by the teachers of aided colleges with 177.82. But, there is no much difference between the mean values of Government and aided colleges. Whereas, the lowest morale is found among self-financing teachers (mean rank being 140.35). Further, it is found out that there is a significant difference in the level of morale among the Government, aided and self-financing teachers. (Asymptotic value being .001).

The analysis of organisational commitment shows that teachers of self-financing colleges have got higher level of commitment than that of Government and aided colleges. The mean rank of teachers of self-financing colleges is 166.66. The second highest mean rank (156.14) is obtained by the teachers of aided colleges. The lowest commitment is found among the Government college teachers with the mean value 150.77. But there is no significant difference found among the groups of teachers in their organisational commitment. (Asymptotic value being .520).

Impact of Morale on Organisational Commitment:

The relation between the two variables morale and organisational commitment is tested through the application of Structural Equation Modelling (SEM) for which the following

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Research Hypothesis is framed:

H_1 - Higher Level of morale of teachers increases Commitment in their job.

Teacher Morale is observed through various parameters such as, Attitude and Interest (towards teaching), Self-Efficacy, Personal Performance Satisfaction, Facilities and Systems, Management functioning, Rapport with Principal, Rapport among Teachers, Work load, Teacher Motivation, Career Growth Opportunity, Student Behaviour, Teacher status and Parents support. And the Commitment is measured through three concepts Affective, Normative and Continuance Commitment. All these sub concepts have their respective indicator variables (Instrument). Structural Equation Modelling (SEM) is best suitable for understanding the relationship between indicator variables with the latent variables (Constructs i.e. Morale and Commitment) and as well as for the relation between the constructs.

Structural Equation Modelling (SEM) can be done by AMOS, LISREL and many other software which use ordinary Lease Square Method for predicting the relationship between variables. Partial Least Square (PLS) method is widely used to study the relations when the sample size is moderate and no multivariate normality condition required. So, this Partial Least Square (PLS) algorithms can be run by, Visual PLS, Smart PLS etc. Visual PLS is open source software in the application of PLS with ease and understandable.

In stage one, the indicator variables are run with Visual PLS to find the factors scores of sub concepts or parameters such as Attitude and Interest (towards teaching), Self Efficacy, Personal Performance Satisfaction, Facilities and Systems, Management functioning, Rapport with Principal, Rapport among Teachers, Work load, Teacher Motivation, Career Growth Opportunity, Student Behaviour, Teacher status and Parents support and the three types of commitment Affective, Normative and Continuance.

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Table – 6: Factor Loading, Residual and Weights

Construct	Indicator	Mean	St. dev	Loading	Residual	Weight
MORALE	Attitude and Interest	4.155000	0.533963	0.573800	0.670800	0.206100
	Self-Efficacy	4.210156	0.440942	0.650400	0.577000	0.224000
	Personal Performance Satisfaction	4.439375	0.462323	0.441800	0.804800	0.129900
	Facilities and Systems	3.253125	0.588545	0.436100	0.809800	0.104900
	Management functioning	3.405208	0.670288	0.620800	0.614700	0.158500
	Rapport with Principal	3.490625	0.525308	0.566300	0.679300	0.130600
	Rapport among Teachers	3.246875	0.731848	0.599600	0.640500	0.153500
	Work load	3.218750	0.845507	0.333700	0.888700	0.076500
	Teacher Motivation	3.287187	0.528194	0.704800	0.503300	0.255100
	Career Growth	2.770625	0.482691	- 0.390100	0.847800	- 0.137000
	Opportunity					
	Student Behavior	3.050000	0.678269	- 0.008900	0.999900	0.077300
	Teacher status	4.108125	0.642631	0.437600	0.808500	0.154500
	Parents support	2.497656	0.671721	- 0.275400	0.924100	- 0.155500
Commitment	AFFACTIV	3.467969	0.514246	0.827300	0.315500	0.409800
	CONTINUA	3.293750	0.667512	0.708700	0.497700	0.287400
	NORMATIV	3.697656	0.614763	0.878900	0.227500	0.520200

In stage two, second order constructs such as teacher morale and organisational commitment are formed taking first order concept factor scores as indicator variables. Table 6 represents the individual factor loadings and other descriptive measures such as mean and standard deviation for the individual indicators. Overall, the teachers' morale is more or less 4 in the 5 point scale.

Confirmatory Factor Analysis:

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Table 7 represents Confirmatory Factor Analysis for individual indicator variables with the constructs. So, from the table, it is inferred that most of the variables grouped (factorised) under 'Morale' Construct.

Table – 7: Factor Structure Matrix of Loadings and Cross-Loadings

Scale Items	MORALE	Commitment
Attitude and Interest	0.5738	0.3435
Self-Efficacy	0.6509	0.3730
Personal Performance Satisfaction	0.4418	0.2164
Facilities and Systems	0.4357	0.1744
Management functioning	0.6212	0.2645
Rapport with Principal	0.5669	0.2179
Rapport among Teachers	0.5994	0.2558
Work load	0.3340	0.1275
Teacher Motivation	0.7048	0.4250
Career Growth Opportunity	-0.3899	-0.2282
Student Behaviour	-0.0089	0.1285
Teacher status	0.4376	0.2574
Parents support	-0.2755	-0.2592
Affective	0.4323	0.8273
Continuance	0.3031	0.7087
Normative	0.5487	0.8789

But a few variables such as student behaviour, parents support are not directly influencing 'Teacher Morale' because their factor loadings are very low comparing with the other variables. Affective, Continuance and Normative Commitments are coming under the same construct Organisational Commitment because, their factor loadings are higher for organisational commitment than the other construct.

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Boot Strap Estimate:

Table – 8 represents the individual influence of the indicator variables on their respective constructs. There were (13+3) 16 regression equations run by VPLS and the results are given in Table 3. Boot Strap is a re-sampling algorithm for non-parametric regression models for testing the statistical significance.

Table – 8: Result of Boot Strap Estimate for the indicator with Constructs Measurement Mode (Loading) BootStrap

		Entire Sample estimate	Mean of Subsamples	Standard error	T-Statistic
Morale	Attitude and Interest	0.5738	0.5678	0.0474	12.1060
	Self Efficacy	0.6504	0.6464	0.0542	11.9948
	Personal Performance Satisfaction	0.4418	0.4431	0.0656	6.7364
	Facilities and Systems	0.4361	0.4101	0.0871	5.0042
	Management functioning	0.6208	0.6023	0.0657	9.4423
	Rapport with Principal	0.5663	0.5510	0.0735	7.7081
	Rapport among Teachers	0.5996	0.5827	0.0624	9.6038
	Work load	0.3337	0.3192	0.1014	3.2906
	Teacher Motivation	0.7048	0.6902	0.0435	16.2054
	Career Growth Opportunity	-0.3901	-0.3772	0.0826	-4.7219
	Student Behavior	-0.0089	-0.0906	0.0732	-0.1216
	Teacher status	0.4376	0.4416	0.0738	5.9334
	Parents support	-0.2754	-0.2892	0.1004	-2.7423
Commitment	Affective	0.8273	0.8234	0.0229	36.0724
	Continuance	0.7087	0.7001	0.0692	10.2431
	Normative	0.8789	0.8779	0.0165	53.3318

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From the table it is inferred that most of the indicators have the t-value which is greater than the table value (table value at 5% level of significance is 2) it shows significant influences except a few variables such as student behaviour and parents support.

Structural Model between Morale and Organisational Commitment

Table – 9 represents the Structural model between the two constructs Teacher Morale and Organisational Commitment. From the Boot Strap sampling estimate the regression co-efficient is found to be 0.55 which is the level of change in the commitment when morale changes. From the t-statistic 14.3930 which is greater than table value (table value is 2 at 5% level of significance) it is inferred that there is a significant relation existing between the constructs Morale and Organisational Commitment. That means, the research hypothesis framed is supported.

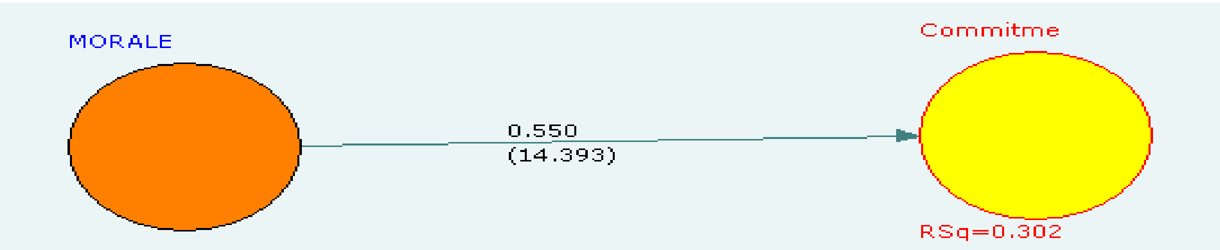
Table – 9: Structural Model—BootStrap

	Entire Sample estimate	Mean of Subsamples	Standard error	T-Statistic
MORALE-> Commitment	0.5500	0.5563	0.0382	14.3930

Impact of Morale on Organisational Commitment:

Figure 1 states the same result in diagrammatic representation. From the figure it is noted that R^2 value is 0.302 which means 30.2% of the Organisational Commitment of the techers is explained by their Morale

Figure 1: Impact of Morale on Organisational Commitment



The rest of 69.8% of Organisational Commitment may come from various other factors.

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Reliability and Discriminant Validity:

The reliability and validity tests of the model are shown in table 5 and table 6. Since, Cronbach Alpha values and composite reliability values are more than 0.5 the reliability of the constructs is ensured. However, as per the convergent validity, it is lower for teacher morale than the organisational commitment. (AVE value is greater than 0.5 for Organisational Commitment but it is lesser for Morale). Further, discriminant validity is observed by comparing AV values (i.e. Average Variance explained within the constructs). The AV values are greater than square of the correlation between the constructs ($.55^2$). Therefore, the discriminant validity of the model is ensured. So, this model has the predictability of the Organisational Commitment through Morale. There is a positive correlation (0.55) found between morale and organisational commitment.

Government, Aided and Self Financing Colleges:

The model is applied to the teachers of Government, aided and self financing colleges separately and the results are shown below in figures 2, 3 and 4.

Figure 2 show that there exists significant relation between morale and organisational commitment among teachers of Government College. (t value being 9.124 which is more than 2 at 5% level of significance) . And further, it is noted that R^2 value is 0.391 which means 39.1% of the Organisational Commitment of the teachers is explained by their Morale.

There exists significant relation between morale and organisational commitment among teachers of aided Colleges which is shown in Figure 3. (t value being 11.566 which is more than 2 at 5% level of significance) .

Figure 2: Morale and Organisational Commitment (Government College)

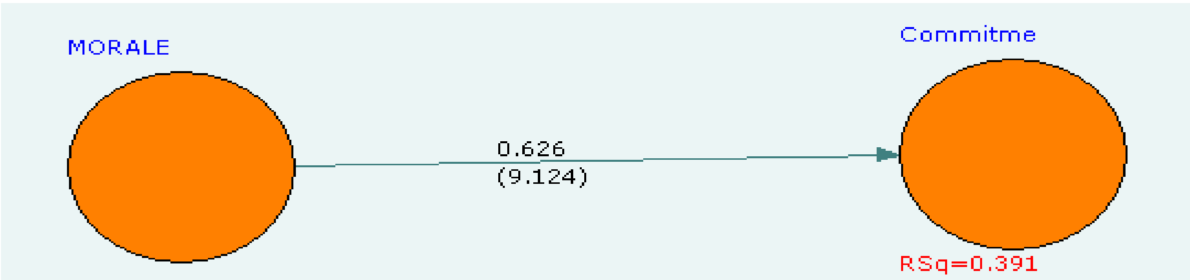

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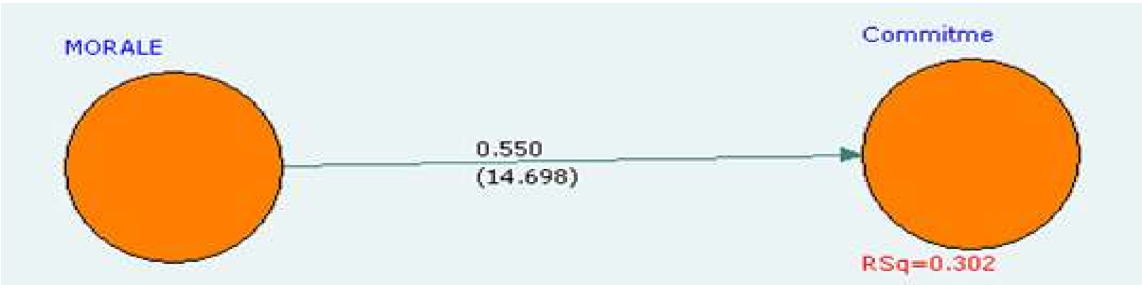
Figure 3: Morale and Organisational Commitment (Aided Colleges)

And further, it is noted that R^2 value is 0.271 which means 27.1% of the Organisational Commitment of the teachers is explained by their Morale.

It is clear from Figure 4 that there exists significant relation between morale and organisational commitment among teachers of self-financing Colleges also. (t value being 14.698 which is more than 2 at 5% level of significance) . And further, it is noted that R^2 value is 0.302 which means 30.2% of the Organisational Commitment of the teachers is explained by their Morale

Figure 4: Morale and Organisational Commitment (Self-financing Colleges)



Conclusion:

The morale is higher in Government colleges and it is the lowest among the self-financing college teachers. Teachers of self-financing colleges have got higher level of commitment and the lowest commitment is found among the Government college teachers. It is also found out that higher the age, educational qualification, teaching level, teaching experience and designation, higher is the morale among the teachers. And the organisational commitment of teachers significantly differs with respect to age, designation and nature of pay. The Structural Equation Modelling showed that up to 30% of Organisational Commitment is determined by morale. It is suggested to boost up the morale of self-financing college teachers as they possess lowest morale. The University and Government may involve in the functioning of colleges and implementation of teachers' welfare provisions so that the teachers will feel secured and motivated to perform their jobs in an effective and efficient way.

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Food vs. Fuel

Punit Kumar Mishra[1] and Rahul Pratyush Mohanty[2]

Abstract

The aim of this paper is to measure the annual carbon footprint, when vegetables and grains travel from farms to consumers. The focus is on the food basket of Cuttack City, Odisha, India. Primarily, this is an exploratory research which includes research instruments namely interviews and survey through questionnaire with the transportation authority across the distribution channel. Additional data collected thorough secondary sources, existing literature. The major findings of this research are the amount of greenhouse gas emission, for the vegetable, rice, wheat, milk and pulses etc., which comprise the food basket, with comparative analysis of grains versus vegetables & milk products, when travels through the distribution network and reaches the consumers of Cuttack City. The study scope is limited to Cuttack City only and the product scope is limited to the vegetarian food and the milk products. This research will provide a better understanding to measure the environmental impact caused by the transportation of food items. Based on this research, distribution channels redesigning can done to make them environmental friendly and sustainable, to achieve food security.

Keywords: **Food Miles, Food Basket, Carbon footprint, Distribution Network, Sustainability.**

JEL code: **M 31**

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Food vs. Fuel

Introduction

In the last five decades, the methods of food production, storage, distribution and consumption have changed significantly. Most sophisticated distribution systems are being used to meet the demand, minimizing food wastages and maintaining quality of the food. But the vast distances that food travels 'from plough to plate' makes it vulnerable to oil supply, inefficient on a per calorie basis, and unsustainable in the long run. In accordance to the fair trade systems, many of these problems can be overcome by creating regional and local food systems which encourages the production and use of local produce. (sustainweb, 2002)

Few studies on the public understanding of sustainable food describes, seasonality in food production is gradually becoming a lost concept in the present situation, as consumers expect all produce to be available at any time of year regardless the availability in the local market. But there is serious concern for environment when food items travel long distance. Transportation and refrigeration rely mostly on fossil fuels to power them, which in turn emit various greenhouse gasses (GHG), which have a detrimental effect on the environment. Since in our country, such studies are very few. This paper will be helpful to gain better insight and understanding. The major objective of this research is to measure the annual carbon footprint, when vegetables and grains travel from the farms to the consumers. The focus is on the food basket of Cuttack City, Odisha, India. This study will help to assess the sustainability of the food distribution channel and addressing the complexity and challenges in effective distribution of food items along with addressing the major concerns for environment.

Background of the Study

'Food Basket' is described as a mixture of basic food products which prepares the usual diet of an individual for daily consumption (Flores, 1980). In another way food basket is defined as a customized basket of local agriculture products for daily consumption (Multitude, 2008). So, the term local produce is evident if we consider a food basket, but for loss of agricultural land due to rapid urbanization (Jiang, 2013) has changed the diet pattern of the indigenous people as they depend more upon the foreign food produces (Mohanty, 2012). The 'global food concept'

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is another reason which created a categorical shift in the farmer community as nations become responsible for only one or two crops to sale it as major commodity, which directly impacted the variety of local food production. This type of food behavior, not only creates a socio-economic imbalance but also impacts the environment due to the massive movement of food products from foreign sites (Hodge & Gorelick, 2002).

The distance the food travels from the source point to the consumption point is termed as food miles. Timothy Lang first coined the term in 1990 to assess the distance travelled by the food and its impact on the environment to go towards sustainability (Lang, 1999). The process to calculate the environmental impact on each stage of transformation and distribution is known as the 'life cycle analyses' of that food product. Because of globalization it is now evident that the distribution of food impacts more to the environment rather than its production (Weber & Matthews, 2008).

Increasing population has increased the demand for fresh fruits and vegetables along with pulses. To meet demand and provide a food in proper quality and nutrition, Supply chain plays a very important role in this sector and becomes even more important because of perishability nature and very short shelf life. It helps to cut costs, and adds to maintain and improve the quality of produce delivered, which are perishable in nature (Veena, 2011).

The environmental impact is calculated as the generation of the greenhouse gases or the carbon footprint. Carbon footprint is measured in tons of carbon dioxide equivalent (tCO_2e). The carbon dioxide equivalent (CO_2e) allows the different greenhouse gases to be compared on a like-for-like basis relative to one unit of CO_2. CO_2e is calculated by multiplying the emissions of each of the six greenhouse gases by its 100 year global warming potential (GWP). A carbon footprint considers all six of the Kyoto Protocol greenhouse gases: Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide (N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF_6). So prior realizing the environmental impact we need to understand the food basket of Cuttack urban area.

In this study Cuttack city has been chosen to represent tier 3 and 4 city in the Odisha state in particular and country in general. The study highlights the difficulty in developing sustainable

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food distribution channel owing to the fact the increasing income and availability of almost all varieties of vegetables and fruits throughout the year.

Objective of the study

- To calculate the annual carbon footprint (CO_2 Emission in grams), when the items of the food basket flows through the distribution network and reaches the consumers of Cuttack city.
- To evaluate the consumption pattern of food items of the food basket to understand the dependency on local food items to achieve sustainability.
- To identify the factors affecting sustainable food distribution network.

Research Methodology

In order to determine food mile for food basket of Cuttack city authors utilized multiphase research design incorporating both qualitative and quantitative research.

(a) Qualitative Research:

The first step of the qualitative research involves extant of literature review and techniques applicable to the specific problems. This embraces the works on existing literatures on food miles, carbon footprints, and different statistics to understand the food basket of Cuttack city. Other relevant research papers on food distribution channel of different food items, transportation system and sustainable distribution channel to have better understanding to measure the annual carbon footprint, when vegetables and grains travel from farms to fork.

Second step of the qualitative research involves semi structured questionnaire for in-depth interview. We have conducted around 20 in-depth interviews with various vendors. The purpose is to know how vendors of different food items source the products and make them available to the end user. Our motto is to have in-depth understanding of their role and challenges across distribution channel. This has helped us know the movement of different food items and develop the model of product movements. The collected data has been analyzed using qualitative content analysis. This is a research method for subjective interpretation of the content of text data through systematic classification process of coding and identifying themes or patterns (Hsieh & Suannon, 2005).

Third step of the qualitative research involves experience surveys of different transporters, small vehicle owners, managers and drivers of heavy vehicles. We took responses from 20 vehicle owners, 20 heavy vehicle drivers and 5 managers of third party logistics to understand the complexity of transportation and variations among different food items while transporting them from source to end users. Keeping the purpose of study in mind summated content analysis has been used. This method starts with counting of words or manifest the content, then extends the analysis to include latent meaning and themes. (Marying, 2000).

(b) Quantitative Research:

The main thrust of the quantitative research is to determine food miles to assess sustainability of food distribution channel for Cuttack city. In order to do this, we need to have consumption data of different food items in our food basket. But, as of now no such data is available. Therefore, we have divided the quantitative research in two stages.

The stage one completely devoted to measure the consumption of food items in our food basket annually. We have collected the monthly consumption of family using closed ended questionnaire and converted that into annual consumption of different items. We have used proportionate stratified random sampling. This is a sampling technique that uses a two-step process to partition the population into subpopulations, or strata. Elements are selected from each stratum by a random procedure. (Malhotra & Dash, 2011). As per USDA (Economic Research Service, 2008) data published in Washington state magazine, Indians spend their 35.8% annual income on food. Since major portion of Indian family income spend on food we took this as classification criteria for strata. At present, there are 16,846 BPL (Below Poverty Line) families, 5,965 under the Antodaya and 1,38,063 APL (Above Poverty Line) families under the corporation limits.(Barik, 2014). We took 40 respondents from BPL and 80 from APL and as sampling frame we have used list of BPL from Cuttack Municipal Corporation and voter list.

The second step in quantitative research involves calculation of food mile and determination of greenhouse gas emission in the process of transportation of food item from farm to fork. A

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Weighted Average Source Distance (WASD) is used to calculate a single distance figure that combines information on the distances from production to point of sale and the amount of food product transported. (Carlsson-Kanyama, 1997).

To calculate Carbon Footprint we found the following method has been used:
CO_2 Emission (in gms. w. r. t. vehicle used) = TV ∗ TD ∗ CO_2 emission factor
Where,
Transportation Volume (TV) measured in Tonne Transportation Distance (TD) measured in Kilometer CO_2e Factor is measured in gram/tone-km
Avg. CO_2e ; Factor for Diesel trucks and vans are taken as 62g/tone-km (ECTA, 2011) ; Avg. CO_2e Factor for Gasoline used vehicles are taken as 172g/tone-km (DEFRA, 2013).

About the City:

As per Cuttack Municipal Corporation (Cuttack Municipal Corporation)**:**
Cuttack, known as the cultural capital of Odisha is situated at the apex of the delta formed by the river Mahanadi and Kathajodi. The City experiences a hot and humid climate in summer characterized by temperatures going up as high as above 40° C and a dry and cold climate in winter with temperature as low as 10°C. Summer starts at the end of March and monsoon rains hit the city during September to middle October and supply most of the city's annual average rainfall.

Cuttack lies in the national high way No.5, connecting the metropolitan cities of Kolkata and Chennai. Well connected by rail, Cuttack is an important hub for most trains. The nearest airport is Biju Pattnaik Airport, 28 Kms away. It also has the largest bus terminus of the state.

The City is subdivided into a number of wards.

Area	:	192.5 Sq.Km.
Population	:	6,10,189 (as per 2011 census)
Total Nos. of Wards	:	59 Nos.
Identified Slums Under C.M.C.	:	264 Nos.
No. of Parks	:	29 Nos.
Males Population	:	3,16,242
Female Population	:	2,93,947

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Food Basket Analysis of Cuttack City:

This research paper concentrates upon the distribution network and physical distribution of major food items included in the food basket of the population of Cuttack City, according to the consumption pattern and the environmental impact when the food follows through the distribution chain i.e. from the source to the consumption point. The major agenda behind determining the food basket is to know the actual amount of local crops used and the dependency on the foreign food items in daily consumption. The typical food basket of city people contains the food item on monthly basis is given in table no. 1

Table 1: Monthly consumption food items: Avg. family size is taken Family Size= (X=4)

Item	Consumption in kg or litre or in no.	Item	Consumption in kg or litre or in no.	Item	Consumption in kg or litre or in no.
Rice (Arwa)	16.2	Potato	11	Milk	30
Rice (Ushna)	8.12	Onion	6.5	Curd	10
Rice (Basmati)	2.7	Tomato	6	Paneer	3
Dal (moong)	3	Kakharu (Veg.) (pumpkin)	2.5	Cheese	1
Dal (Arhar)	2.5	Kaddu (Veg.)	2.2	Sugar	5
Dal (biri)	1.5	Bhendi (veg.)	2	Ghee	1
Dal (chana)	0.5	Cabbage	5	Aaata (Wheat flour)	20
Dal (Masoor)	0.5	Baingan (Brinjal)	5	Banana	5
Besan	1.5	Other Seasonal Vegetables	3	Coconut	3
Chura and chura powder	8.4	Saag (Leafy Veg.)	2	Other friuts	10

Source: Based on Pilot study conducted for understanding food basket of the city by authors

Authors classified the food basket in the following manner on the basis of product

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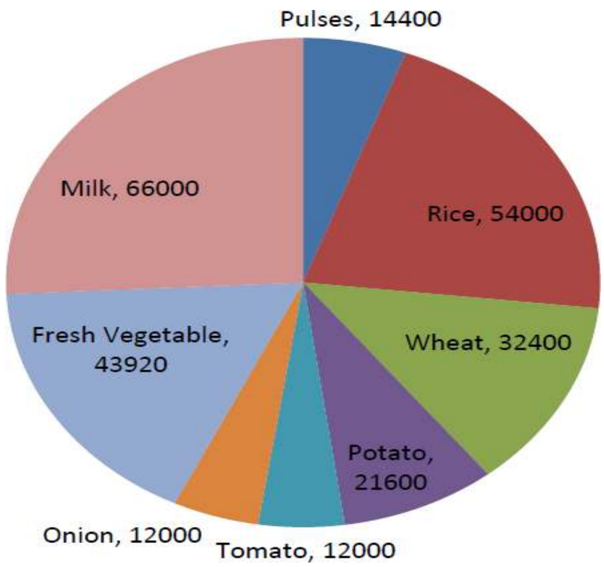
characteristics and their distribution channel:

Food Basket of Cuttack City: Pulses, Rice, Wheat, Potato, Tomato, Onion, Fresh Vegetables, Milk and Milk Products

Figure 1: Total Annual Consumption of Food in Cuttack city



Source: Based on Primary Data Collection

Distribution network of the food items in the Cuttack Urban Area: Traditional Method:

The food items follow an as usual source to consumer distribution network pattern. According to previous researches and understanding the distribution network is divided in to four regions. (Rajkumar, 2010)

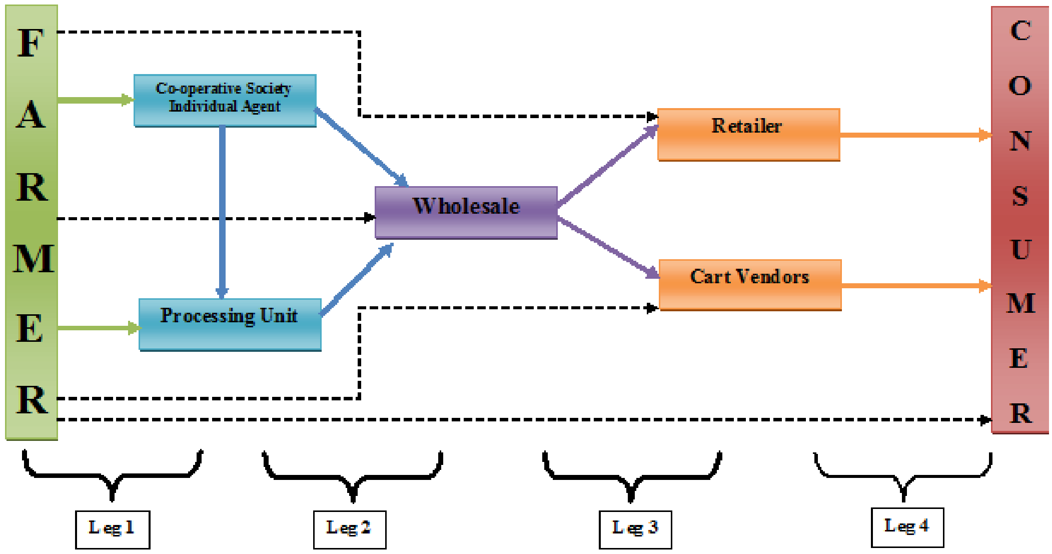
Figure 2: Traditional Food Distribution Network

Leg 1 → **Source to Processing Unit**

Leg 2 → **Processing Unit to Wholesaler**

Leg 3 → **Wholesaler to the Retailers**

Leg 4 → **Retailers to the Consumers**

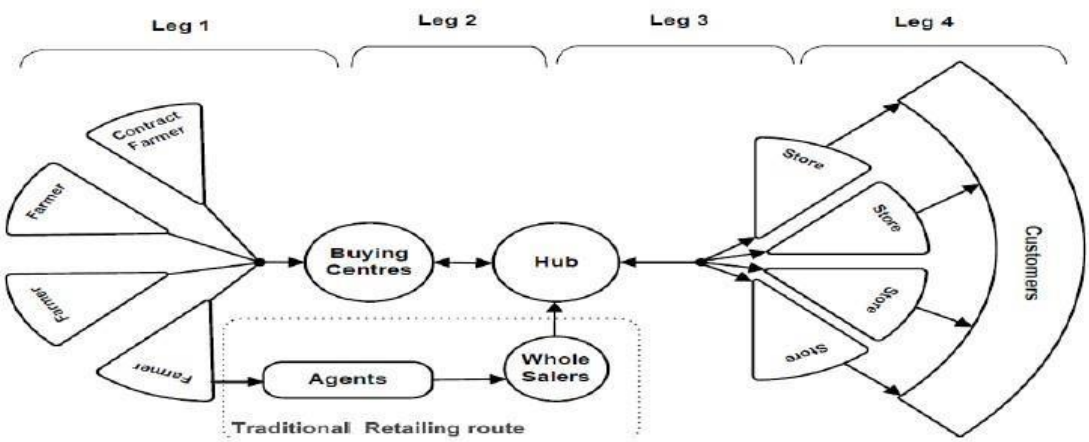


Source: Rajkumar, 2010

Hub and Spoke Model:

Various organized retailers like reliance fresh, food bazar (future Group), Udyaan Fresh have adopted 'Hub & Spoke' model for the supply chain of F&V, and Figure 3 explains the model. Important members in the model are Farmers, Buying Centers, Agents, Wholesalers, and organized retail stores along with customers. This model has buying centers; hub and stores (retail outlets) are operational units of the organized retailers. Small farmers and Contract farmers are the major source of supply of F&V in this model.

Figure 3: Supply Chain of Hub & Spoke



Source: Halder, 2011

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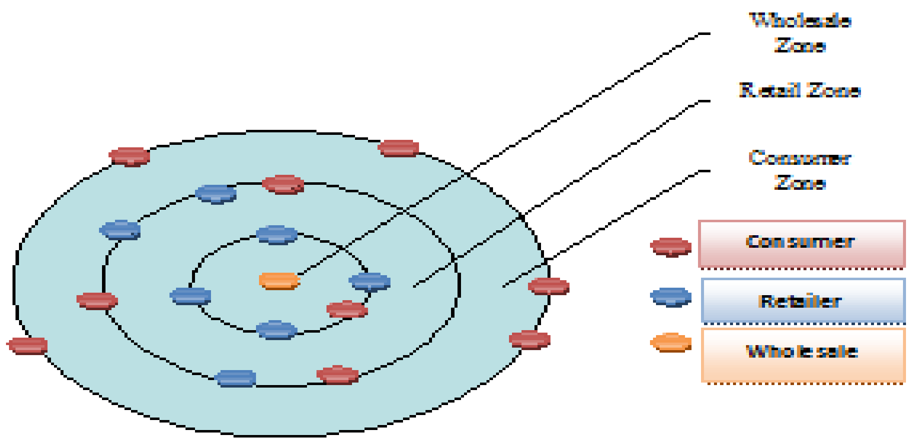
Wholesale Zone, Retailer Zone of Cuttack City:

To make the research simple the city is divided in to three zones i.e. wholesale zone, retail zone, consumer zone.

Figure 4: Wholesale Zone, Retailer Zone of Cuttack City



Source: Developed by the Authors based on experience survey

In accordance to the food basket milk and fresh vegetable distribution network follow a different path than the distribution of pulses, rice, wheat, potato, tomato and onion in the city. The zonal distribution of consumers, retailers and the wholesale area is demonstrated keeping the geography of Cuttack city in mind. As per the trend the wholesale area i.e. Malgodown, is centrally located and the radius of the city is of 9 km. The retail stores are located in between the city perimeter, and the consumers follow a maximum travel distance of 1 km to complete the distribution network.

Distribution of fresh vegetable:

As per the observation, the distribution of fresh vegetable follows slightly different path than the other items in the food basket. The farmers sale their produces in Paga, Kandarpur and Banki areas which are located in the north- eastern, eastern and western part of the city with distance from the wholesale areas 17 km, 17 km and 50 km respectively. The city is having two Mandi (wholesale for the fresh vegetable), which are located in the central part and the western part of the city, within its perimeter and the retailers follow a balanced procurement policy according to their accessibility to the wholesale area and availability of the products. Here the consumers follow a distance of 1 km from the retail area.

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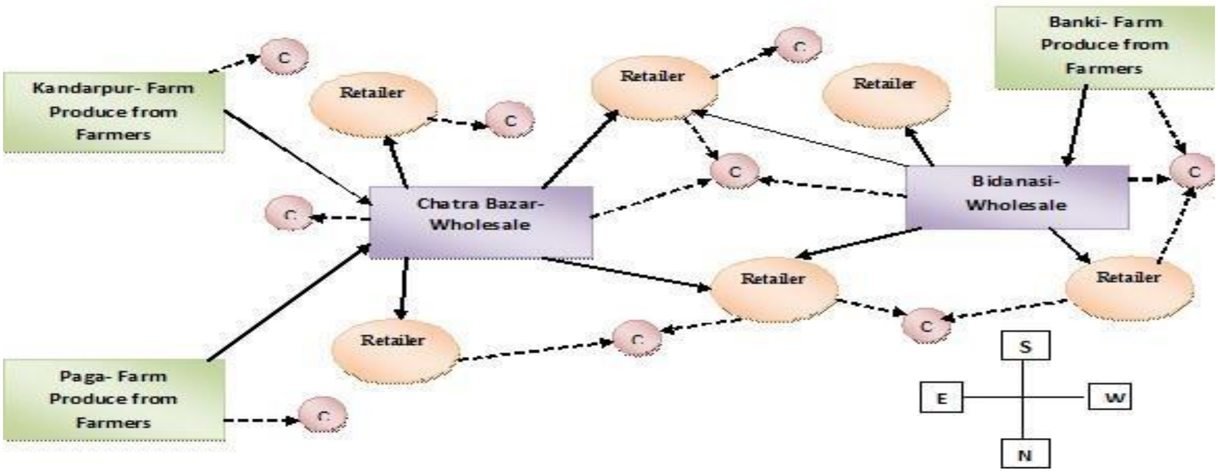
Figure 5: Model for Fresh Vegetable Distribution in Cuttack

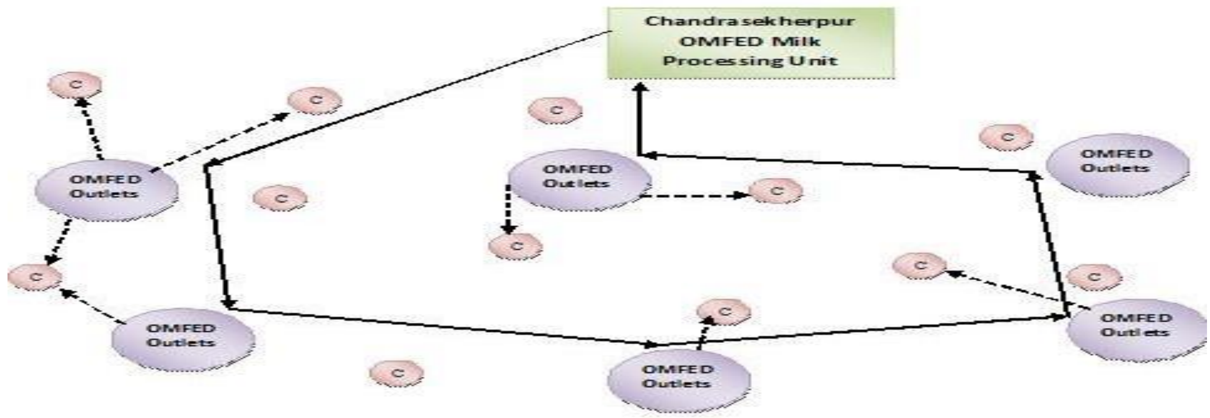


Source: Developed by the Authors based on experience survey

The distribution model for milk:

The city depends upon the government of Odisha milk processing and distribution unit (OMFED- Odisha Milk Federation), to compensate the demand of milk. Major dependency is upon the Chandrasekherpur OMFED milk processing unit, which is 40 km away of the city. It is observed that OMFED has got its numerous outlets in the city where packaged milk and other milk products are distributed every day morning and evening. The consumers follow a pattern of buying milk from nearest outlet which ranges from 1-2 Km.

Figure 6: Model for Milk Distribution (Milk-Van Method) in Cuttack



Source: Developed by the Authors based on experience survey

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Findings & Conclusions

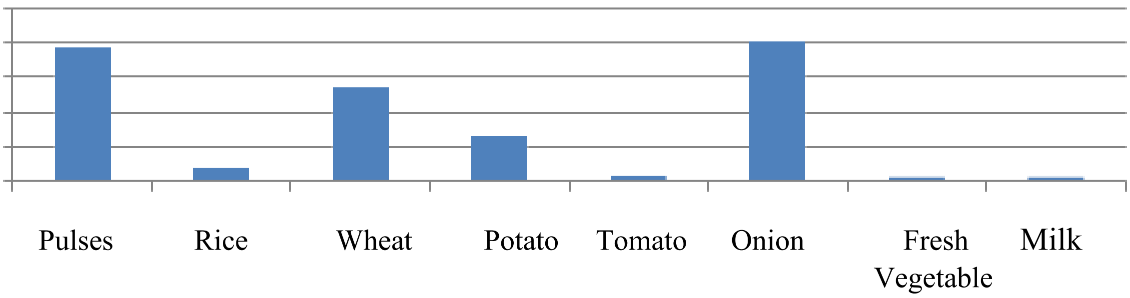
Keeping the total consumption in mind with respect to the total population of the city the CO2e in gram is calculated for each of the food items when it travels from the source to the consumer in a yearly basis. The data suggest that grains which is around 39% of total consumption contributes 64% emission of CO_2 whereas reverse is true in case of vegetables, milk and milk products. So we can see the difference is 29% between grains and vegetables & milk for yearly emission of CO_2.

Table 2: Annual Consumption and yearly CO_2 Emission

Categories	Food Items	Yearly CO2 Emission in Gram	Total Annual Consumption in 1000 kgs	Contribution of food item in CO2 emission in %	Total annual consumption in percentage	Ratio of total annual consumption to yearly CO2
Grains	Pulses	1131.24281	14400	21.65381523	5.617977528	3.854379111
	Rice	423.6900232	54000	8.110111636	21.06741573	0.384959966
	Wheat	1793.834131	32400	34.33688372	12.64044944	2.716429023
	Subtotal grains	**3348.766964**	**100800**	**64.10081059**	**39.3258427**	**6.9557681**
Vegetables, Milk and Milk Products	Potato	569.9931452	21600	10.91058979	8.426966292	1.294723321
	Tomato	41.65925248	12000	0.797425405	4.68164794	0.170330066
	Onion	989.3168525	12000	18.93712308	4.68164794	4.04496949
	Fresh Vegetable	108.5939704	43920	2.078664058	17.13483146	0.121312197
	Milk	165.8891872	66000	3.175387084	25.74906367	0.123320487
	Sub Total	**1875.452408**	**155520**	**35.89918942**	**60.6741573**	**5.754655561**
Grand Total		**5224.219372**	**256320**	**100**	**100**	**12.71042366**

Source: Based on Primary Data Collection

Figure 7: Ratio of total annual consumption to yearly CO_2 emission



Source: Based on Primary Data Collection

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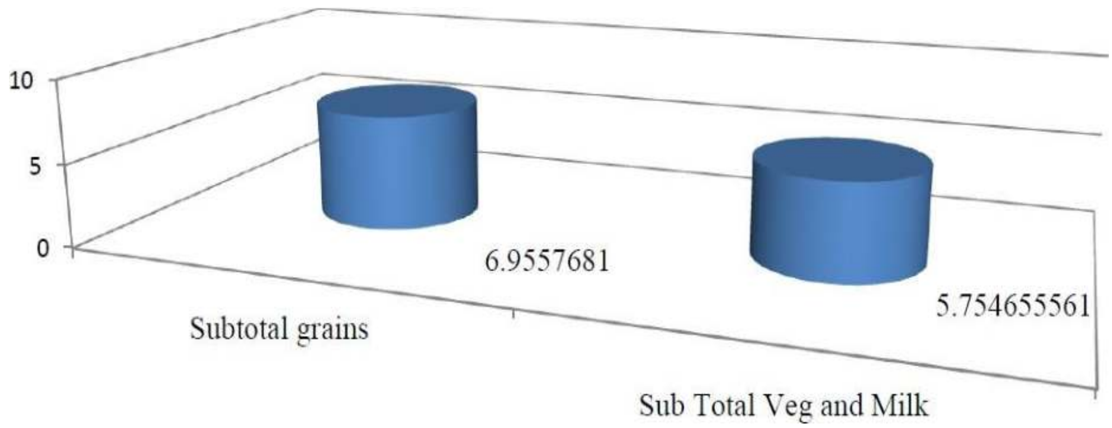
Figure 8: Total annual consumption in percentage

Source: **Based on Primary Data Collection**

Figure 9: Ratio of total annual consumption to yearly CO_2 emission



Source: Based on Primary Data Collection

We can see the difference is in real terms just around 10% when we consider ratio of total annual consumption to yearly emission of CO_2. This clearly explains that rather the quantity of food consumption than distance and kind of transportation vehicle affects the carbon footprint. The various distribution channel used at local level further increase the carbon footprint because of smaller vehicle to reach different nook and corner of the city. It is quite evident if proper support and initiative will be taken by local authorities and people more organized distribution network with lesser GHG emission can be achieved. Wastage of vegetable because of poor infrastructure and refrigeration facility further increases dependency on foreign goods which further increase carbon footprints.

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According to the research the major objective to calculate the CO2 emission is achieved, which will provide a firm understanding to analyze the present distribution practices to redesign a sustainable model in future. Moreover, the local items generate comparatively less CO_2 emission than the foreign food items like pulses, wheat and onion.

The factors and aspects addressed in paper may further be empirically tested and validated on the grains and F&V distribution network. Cuttack city is a 3 tier city and has similar characteristics of tier 3 and 4 cities. Eventually, the study will help to study and develop sustainable distribution channel for food across Odisha in particular and across country in general.

Limitations of the study

In our study we are limited to vegetarian food items only. There are various processed food, ready to eat items, tea, coffee, packaged cold drink, fruit juice, oil, spices etc. along with non-vegetarian items are not part of our food basket. Since, no proper data on floating population and their consumption pattern is available we took the permanent residents of Cuttack city only.

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Reporting with Reputation and Returns - The Emerging Significance of Sustainability Accounting

Varun Rajan[1]

Abstract

Sustainability Accounting (SA) and Sustainability Reporting (SR) are relatively new concepts in today's world but they have immense potential to develop businesses. This paper tries to convey the significance of both Sustainability Accounting and Reporting with the help of its history and how it has developed in the recent decades. It has portrayed the benefits and the need for sustainability in accounting and reporting also as we all know that all dimensions of sustainability need to be covered. Though there are many challenges with implementing sustainability accounting there are also many opportunities in the future for this concept. Since the concept chronicles around sustainable development in reporting, accounting with bringing to light the importance of the social and environmental dimensions in sustainability, there is a lot of scope to grow. Many organizations have already started issuing sustainability reports and adopting sustainability accounting in their activities. In a crux SR & SA is beneficial for all stakeholders and is the best way for an organization to keep everyone happy along with achieving its organizational objectives.

Keywords: - Sustainability, Accounting, Reporting

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Reporting with Reputation and Returns - The Emerging Significance of Sustainability Accounting

Introduction

Sustainability could be defined as an ability or capacity of something to be maintained or to sustain itself. It is significant in today's world as the resources are limited and the essence of the hour is development of global economies as a whole. Sustainability helps in increasing and improving the overall efficiency of both economic and non-economic activities across the globe. Sustainability is generally divided into three dimensions (i) Environmental factors that deal with natural resources like water energy greenhouse gases etc, (ii) Social Factors which include human rights , public policies , social safety and anti-corruption, (iii) Economic Factors which focus on accountability, value of stakeholders, economic and financial performance (Learn, n.d.).

Sustainability Accounting Concept

Sustainability Accounting on the other hand is a relatively new concept and gives weight to the social and environmental factors also unlike other management functions which give most concern to economic factors. Sustainability Accounting is the process of disclosure of non-financials also to stakeholders of an organization. It differs from Financial Accounting as it also deals with economic, social and environmental performance in such a way that benefits suppliers, government , employees and customers. This is done through certain ways like sustainability reporting, corporate social responsibility and non – financial reporting. With the use of these instruments the world economy can become healthier and more efficient in the coming generations as these instruments benefit all parts of society. Unlike financial accounting, sustainability accounting does not put overemphasis on money and cash flows, it is more concerned with improving the economic performance of an organization by promotion of transparency to stakeholders.

This is justified by the motto of Sustainability Accounting which is the 3P's – People, Planet and Profits. In most organizations the only goal is profits but sustainability accounting is an initiative for the people and planet. People are the stakeholders of an organization be it the

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suppliers, customers, employees or investors and sustainability accounting protect the interests of these people. Planet is the natural resources in the world and sustainability accounting is a way which suggests innovative ways to limit depletion of Earth's resources by increasing efficiency of an organization.

Emergence of Sustainability Accounting

It has come up from developments in the field of accounting. The main concept was to modify the traditional techniques of cost, managerial and financial accounting. This was to be done by bringing some changes which were necessary to bring up sustainability as an aim in accounting also. It was a whole new approach to base the whole system of accounting on promoting a strategy of sustainability. It started in the early 1970's where a few organizations started disclosures which had information related to the social dimension like employees and investors. A lot of environmental and social matters were brought up during this decade. In this period there were no frameworks or standards set up.

In the next decade that is 1981 – 1990 there were two stages – the first was more into the social dimensions and social audits and the second which is the latter 5 years was into environmental dimensions. In 1990 to 1995 the concept of environmental dimensions further developed.

Since 1995 there have been many developments as the need has also increased with the amount of scams that have occurred in the recent years. Global Reporting Initiation (GRI) was set up in 1997 which was one of the first initiatives to encourage and promote Sustainability Accounting and Sustainability Reporting.

In India also there have been many developments illustrated in the table below: -

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Table 1 – Initiatives and Policies Year wise in India

Years	Initiatives and Policies
2013	Companies Act 2013 makes it mandatory for all companies to keep CSR activities as 2% of net profits earned during the year
2011	New Company's Bill tabled in Parliament for discussion SEBI Board decides to mandate submission of Business Responsibility Report by top 100 listed companies as per NVGs. Release of National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business by Ministry of Corporate Affairs
2010	Guidelines on Corporate Social Responsibility for Central Public Sector Enterprises released by Department of Public Enterprises, Govt. of India
2008	Release of Voluntary Corporate Social Responsibility Guidelines by Ministry of Corporate Affairs Release of National Action Plan on Climate Change (CC) by Prime Minister's Council on CC
2006	Revised EIA notified to include 7 more sectors taking it to 39
2003	Charter on Corporate Responsibility for Environmental Protection (CREP) by MOEF SEBI modifies clause 49 to incorporate recommendations of its Committee on Corporate Governance and public feedback
2000	SEBI specifies principles of Corporate Governance as listing requirement under clause 49
1994	Environment Impact Assessment (EIA) notified by Ministry of

(Bauer, 2012)

Sustainability Reporting

Sustainability Reporting is a method in Sustainability accounting which involves the making of a sustainable report which is an overall organizational report which includes the goals, vision and missions of the organization. It gives information about how the organization wants to contribute to the economy, society and environment. This can be used by stakeholders like investors, government to understand the underlying motives of the organization. The sustainability reporting is gaining popularity slowly but steadily as it is a very effective way to show commitment of an organization towards development of the economy , society and the environment . This enhances internal performance of an organization and also helps in increasing the reputation of an organization in the eyes of the corporate world.

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Types of Reports

Annual report is a comprehensive report on what a company has done throughout the year. It gives emphasis on financial statements like Income Statement which is the Profit and Loss and Position Statement which is the Balance Sheet. It also includes the cash flows so it has emphasis on money and profits. It does not deal with the social and environmental parts of sustainability. Infact even economically annual reports do not seek for sustainability with efficiency. Basically it is only concerned with the financials and conveys to the owners how the company is doing in terms of assets, liabilities, profits, reserves etc.

On the other hand a **sustainability report** deals with other factors like social and environmental factors also. It handles the economic part also better as it is done with instruments like CSR that follow guidelines thus increasing effectiveness and efficiency of the organization. A sustainability report is a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities. A sustainability report also presents the organization's values and governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy.

The **integrated reporting** is a new standard for corporate communication, and helps to complete financial and sustainability reports. An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects lead to the creation of value over the short, medium and long term. It means the integrated representation of a company's performance in terms of both financial and other value relevant information. Integrated Reporting provides greater context for performance data, clarifies how value relevant information fits into operations or a business, and may help embed long-termism into company decision making.

Need & Significance of Sustainability Accounting and Reporting

The concept helps in building trust with all stakeholders of the companies so the relation between the company and its suppliers, customers, investors is further strengthened. Making sure that the individuals and groups that are involved with the organization have a good relation is important as eventually all deals work on mutual consent. Trust is a very important

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factor that makes this possible thus demonstrating openness and accountability, responsibility of an organization. It helps to maintain transparency about both financial and non-financial performance unlike previous methods. Non-Financial performance is also given weightage in sustainability reports.

Sustainability Accounting also improves internal processes and systems by allowing suggestions from internal and external stakeholders. By disclosure of all non – financial facts like qualitative information helps in solution and simplification of activites inside an organization. This helps the internal management to make better decision in lesser time. This eventually leads to lesser costs as monitoring of various issues like consumption of materials, waste of materials etc. This overall increases the productivity of organization which leads to better economic performance.

In a sustainability report it is necessary to clearly define the mission and vision of the organization. Through this it is easy to find out the goals that need to be achieved during a certain period of time. Also many strategies and policies are made after a lot of analysis. This helps in two ways – first being usefulness for the analysis of strengths weaknesses, opportunities and threats, second being the policies are much more effective and efficient. Sustainability becomes a coherent part of all strategies and operations which ensures smooth functioning of the organization

Sustainability Reports make sure that an organization complies with all legal requirements and guidelines that are set up by any authority. As sustainability accounting is an initiative it has its own Standards like GRI has G 3, G 3 .1 and the latest G4. This helps in meeting regulatory requirements and avoiding fines and penalties being levied on the organization. When an organization adopts sustainability measures it automatically gets an advantage over companies in the same industry as well as different industries. Companies that issue sustainability reports are considered to be leaders and innovators so it is in a much better position to negotiate for investment. This also helps in attracting more customers that will be brand loyal to an organization. People seeking for jobs will also be eager to join such an organization as there would be a very good working environment. This also helps an organization to diversify its products for growth and expansion into new areas of business.

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Risk Management is another important function of Sustainability accounting as it thoroughly analyses all the future uncertainties that can occur in an organization. The policies and strategies are made in such a way to mitigate risks and also control risks so that they have the least possible impact on the organization if they occur

Benefits of SR & SA

There are also several other benefits that companies can avail by issuing sustainable reports and using sustainable accounting.

Internal benefits for companies and organizations can include:

- Increased understanding of risks and opportunities
- Emphasizing the link between financial and non-financial performance
- Influencing long term management strategy and policy, and business plans
- Streamlining processes, reducing costs and improving efficiency
- Benchmarking and assessing sustainability performance with respect to laws, norms, codes, performance standards, and voluntary initiatives
- Avoiding being implicated in publicized environmental, social and governance failures
- Comparing performance internally, and between organizations and sector

External benefits of sustainability reporting can include:

- Mitigating – or reversing – negative environmental, social and governance impacts
- Improving reputation and brand loyalty
- Enabling external stakeholders to understand the organization's true value, and tangible and intangible assets
- Demonstrating how the organization influences, and is influenced by, expectations about sustainable development

(Bertazzi, n.d.)

Push & Pull Factors

There are certain push and pull factors also that influence companies to go towars sustainability accounting.

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Push factors are basically the external factors that influence an organization

- Relations with Investors
- Customers and Consumers satisfaction
- Global Economic Integration
- Pressure from Political , Social Issues
- Needs of the employees

Pull factors are basically the internal factors that influence an organization

- Increased efficiency with emphasis on sustainability
- Better control over management
- Encourage employees to reach heights of their potential
- More standard and uniform with the use of guidelines and framework

Frameworks & Initiatives

The concept of sustainability accounting is going on in the global economy and is relatively new so it has a lot of potential to grow with the objective of sustainable development. It basically acknowledges the fact that financial information can be shown along with social and environmental factors to increase the overall impact. The frameworks and reporting standards are not fully developed and established but there are a number of standards guidelines and regulations to follow like Global Reporting Initiative Standards. This basically allows for more flexibility while making reports and the sustainable report aims to deal with all factors. This leads to alignment of organizational goals with other stakeholders in such a manner that the organizations relations are strengthened

These days companies use various different methods of reporting like performance reports of the three sustainability dimension – environmental, social and economic. The size of the reports depends and varies from company to company. The company makes a hard copy available as well as a downloadable PDF on their official website. Companies require help and assistance in creating such reports and there are organizations like GRI that provide the same. GRI is the most used standard by companies as it has been around for the longest in the sustainability accounting era.

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Sustainability accounting is still developing so it is not necessary by the law for a company to issue sustainability reports in almost all the countries. But there are still many frameworks that make guidelines and standards, by following these a company gains all the benefits as mentioned above and by not following a company just loses out on extra credibility and reputation.

There are 3 main organizations that are involved in the Sustainable Accounting and Reporting activities like development of policies and frameworks for better integration of the three dimension of sustainability : -

GRI -“”The GRI is a multi-stakeholder organization that is committed to developing and maintaining the "Sustainability Reporting Guidelines." The goal is the continuous improvement of sustainability reporting, this is only a protocol that approaches the application levels. There are three levels of reporting A, B and C, but these are not yet legally ratified fundamentals and are only used to assist companies with their sustainable reports.

GRI is one of the main initiatives that supports Sustainability Accounting and Sustainability Reporting and issues a lot of standards. From the year 2000 till now G1 G2 G3 G3.1 and G4 Standards have been framed by GRI and that is why most companies follow GRI or take assistance from GRI

On the one hand the UNCSD focuses only on the environmental dimension of the sustainability accounting. On the other hand the OECD (Organization for Economic Co-operation and Development) focuses only in two frameworks - the analytical and accounting frameworks

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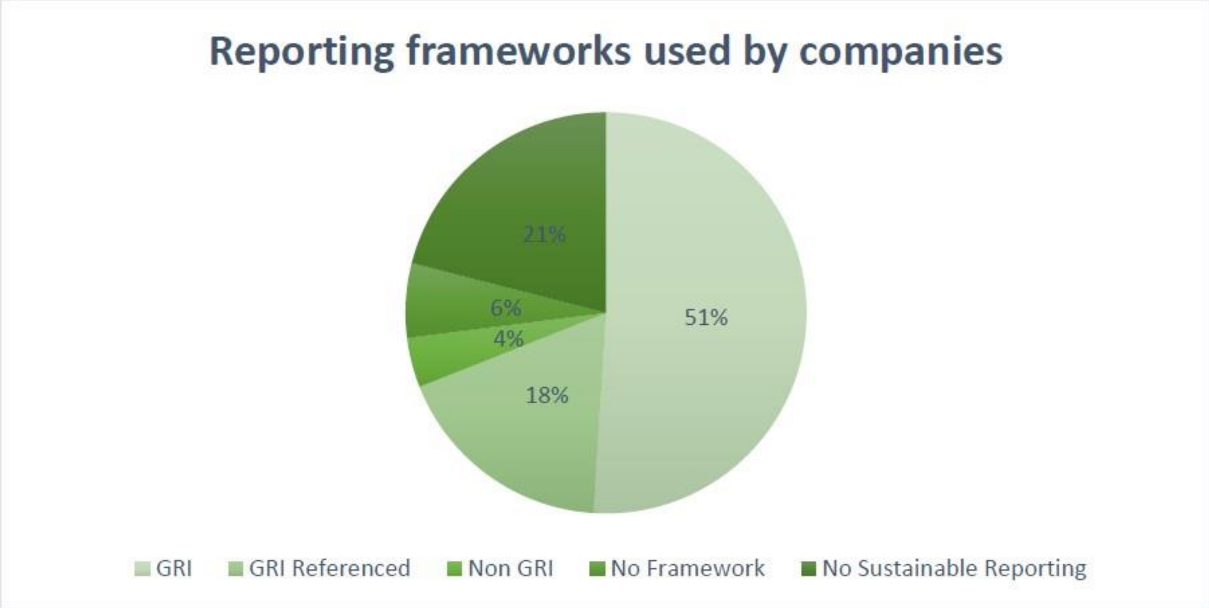

Majority of companies use GRI as it is the most user friendly Initiative (Citizenship, 2013)

Challenges Faced

Most of the challenges associated with sustainability accounting and reporting is the availability, reliability of the data. It is very tough to find accurate data for the same. Some companies just don't want to publish and disclose information to the public where as others don't think it is necessary to issue such reports. Small companies have limited resource to prepare such reports as these are time consuming and are also expensive as there is a requirement of a lot of analysis.

Future Opportunities and Trends

Sustainability Reporting and Accounting has a very bright future as many organizations have started adopting frameworks of sustainability accounting as they have understood the need and importance of these concepts. They now feel that these concepts can boost their image. In India about 80 companies have started this. The number of Sustainability reports issued also keeps increasing as in the chart below

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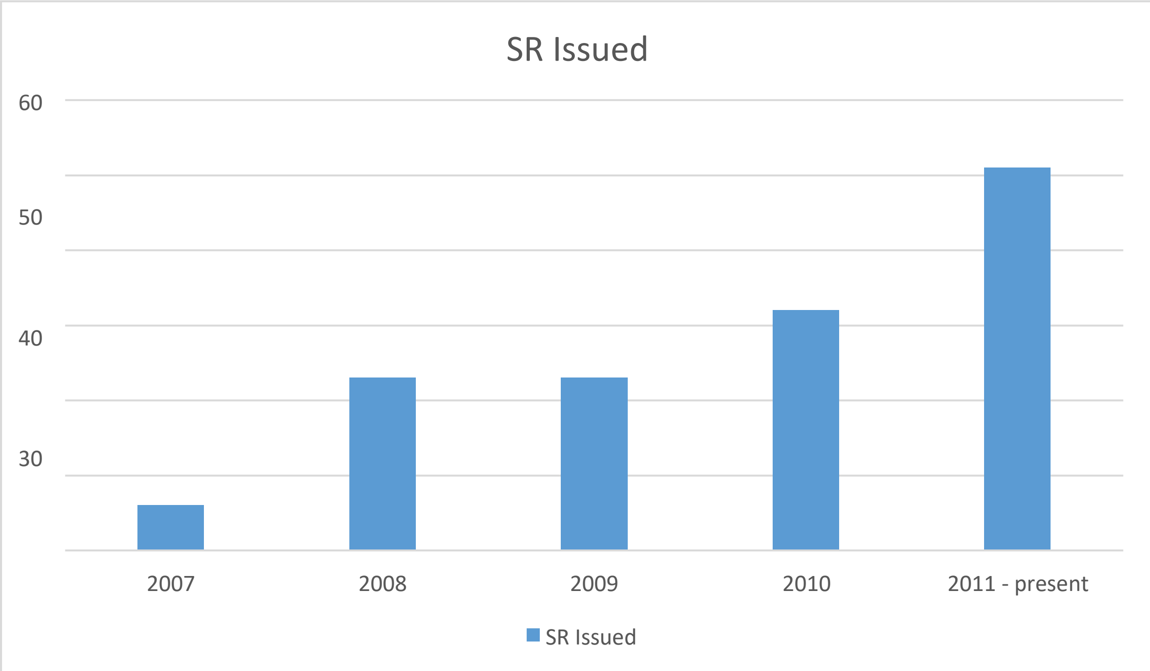

(Bauer, 2012)

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Barriers in restructuring university curriculum for a sustainable future

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Abstract

In recent years, increasing awareness about resource depletion and the need created for its preservation have emphasized the concept of Sustainable Development (SD) across the globe. Although sustainable development became famous after the Brundtland Commission report 1987, many higher educational institutions in the world have not yet sufficiently introduced SD to their systems. The purpose of the study is to identify and validate the barriers faced in incorporating sustainability in the curricula content of various higher education courses in the context of Indian educational institutions, globally acclaimed for their standard of education. The paper also presents solutions developed by analyzing the survey instrument as suggested by the respondents to overcome the barriers that may arise in the process of curriculum change.

Keywords: sustainability, higher education, curriculum, barriers, India

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Barriers in restructuring university curriculum for a sustainable future

1. Introduction

In last few decades, sustainability issues gain increasing importance among government, corporations and consumers across the globe. To remain competitive on the growth chart, companies have begun to focus on their strategies to reduce environmental impact of their products and services. Hiring efficient personnel with sustainable orientation have become the need of the hour. Responding to the current situation, higher education has undergone rapid change. Increasing awareness and responsiveness towards sustainable development have encouraged higher educational institutions to incorporate sustainability in their practices. Sustainable Development (SD) as a concept became famous after the Brundtland Commission report (WCED) in its publication "Our Common future", 1987. After Halifax Consultation (1991), the role of higher education has been exemplified and rooted more importance with UN Decade of Education for Sustainable Development (UNESCO, 2005).

In this decade an increasing number of educational institutions adopted sustainable development agenda showing sustainable oriented behaviour towards the society and various stakeholders (Waas et al., 2010). Higher educational institutions have been realized as the platform to impart sustainable development responsibilities, where students are being prepared to empower themselves as quality citizen to support green and sustainable economies. In addition, it is desirable that students graduating from universities must have a deeper insight about the relevance and future challenges of sustainable living. Thus, universities and other higher educational institutions from different parts of the country have started including sustainability as a major part of their course curriculum. However, any curricular change, including development and inclusion of mandatory sustainability studies, is not an easy task and very few institutions have truly succeeded (de la Harpe and Thomas, 2009; Jones et al., 2008). In context of Indian higher educational institutions offering professional and technical education, the study attempted to validate pre-defined set of barriers for the integration of sustainability in higher education extracted and adapted from (Verhulst and Lambrechts, 2014).

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2. Literature Review

Sustainable Development in Higher Education

The question of how we can achieve sustainability has become a key point of the debate at various conferences and summits (Barth et al., 2014; Müller-Christ, G. et al., 2014). Though the consensus of opinion is rising about inclusion of sustainable development at governmental level but educational institutions need to play a vigorous role in this noble effort (Leal Filho, W., 2011). The role of higher education in creating a sustainable future has been high lightened in several reports and journals but universities have not succeeded to incorporate sustainability sufficiently into the curriculum and to educate future decision- makers to act in a sustainable manner for the long term interests of the society (Currie et al., 2010; Herzig and Moon, 2013). This consequence has drawn a growing attention in reconstructing the curricula of higher education. Redesigning of higher education curricula calls for more debate especially regarding the level of future citizen's competencies to deal with complex issues in a more responsible and sustainable way.

Academic institutions are changing their mission, vision, and edifying practices in order to better cope with growing concerns about social and environmental issues (Md Shahbudin et al., 2011). Higher educational institutions (HEIs) have acted as social change agents (Lozano et al., 2013a; Stephens and Graham, 2010) endeavouring the sustainability objective. Lozano (2006) defined sustainable development as ''.a change process, in which the societies improve their quality of life, reaching dynamic equilibrium between the economic and social aspects, while protecting, caring for and improving the natural environment. This integration and equilibrium among these three aspects must be taught and transferred from this generation to the next and the next''. Wals (2013) recognized higher education institutions (HEIs) as the source to make more systemic changes towards sustainability.

With Agenda 21(Chapter 36) emphasizing higher education's role in achieving sustainable development (UNCED, 1993), universities has received growing attention at both national and international levels. Higher educational institutions (HEIs) incorporating sustainability into their curricula have risen in the last decade (Lozano, 2010). Few among the others are still in the process of finding various means to integrate sustainability into their curricula (Rusinko, 2010). Previous research has shown that higher education institutions (HEIs) apply various

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methods to change and transform the traditional market oriented teaching into sustainability related pedagogy (Alcaraz, 2010; Godemann et al., 2011; Orlitzky and Moon., 2010). Incorporating sustainability related content i.e sustainable development, corporate social responsibility, sustainable entrepreneurship, leadership, climate change, energy conservation, waste treatment, environment studies etc. into the curricula of higher education (Stubbs and Schapper, 2011; Rusinko, 2010; Bremer and Lopez-Franco, 2006; Ceulemans and De Prins, 2010; Pappas et al., 2013; Savelyeva and McKenna, 2011; Stewart, 2010; Watson et al., 2013) has been observed in last few years. Four main approaches have been presented to incorporate sustainability into the higher education curricula (Lozano et al. 2014). These approaches includes coverage of some environmental issues in an existing course, developing a specific sustainability course, developing sustainable development as a concept in regular disciplinary courses or/and as a specialization within the framework of each faculty. Through the process of incorporation of sustainability into the course curriculum, institutions are able to generate new knowledge and contribute to developing competencies and raising awareness towards sustainability issues.

Barriers to change while incorporating sustainability in higher education curriculum

Change in the curriculum of higher education towards sustainability is not an easy task. Adding sustainability as a new requirement means changing the criteria in the whole decision-making process chain. Velazquez et al. (2005) points out many factors that could obstruct the integration of sustainability oriented curriculum. Earlier, a number of studies have identified and described barriers for change and critical success factors in higher educational system (Lambrechts et al., 2009; Lozano, 2006; Mazhar et al., 2014; Wright and Horst, 2013, Lozano et al. 2013b).

Table 1 has been presented based on literature review (Verhulst & Lambrechts, 2014) which provides an overview of barriers identified and classified into three groups: lack of awareness, structure of education and lack of resources. In the context of incorporating sustainability in curriculum, the list of barriers identified is static in nature; which does not consider the realism of changing conditions over time.

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Table 1: Barriers in incorporating sustainability into the university curriculum (Verhulst & Lambrechts, 2014)

Lack of Awareness	**LOA1**. Consideration of SD as little or no relevance in curriculum. **LOA2**. Lack of sustainability oriented policies. **LOA3**. Insecurity and threat to academic credibility from the faculty members. **LOA4.**Lack of understanding of Sustainable Development concepts and definitions. **LOA5**. Lack of faculty training. **LOA6**. Lack of interest and participation. **LOA7.**Lack of support from the top management.
Structure of Education	**SME 1**. Conservative disciplinary university structure. **SME2**. Inefficient communication **SME 3**. Resistance to change. **SME 4**. Focussed on short-term goal. **SME 5**. Lack of interdisciplinary research and education. **SME6**. Overcrowded curriculum **SME7**. Content-based learning
Lack of Resources	**LR1**. Lack of physical place **LR2**. High work pressure and lack of time. **LR 3.** Lack of consistent legislation **LR4**. . Lack of access to information. **LR 5**. Lack of performance indicators. **LR6**. Lack of financial support. **LR7**. Technical problems

3. MEASUREMENT INSTRUMENT

The survey instrument was segmented into three sections. The first section consists of respondents' demographic characteristics. Second section includes the statements related to the barriers faced in incorporating sustainability in university curriculum extracted and adapted from (Verhulst and Lambrechts, 2014) under three broad factors: lack of awareness, structure of education and lack of resources. A five-point Likert scale was used ranging from 1 to 5, indicating [1] Very Low, [2] Low, [3] Medium,[4] High and [5] Very High, where '1' stands for strong disagreement and '5' represents strong agreement (Lin and Huang, 2012; Wang et al., 2013).The third section is comprised of open-ended questions sought to suggest solutions to overcome the confronted barriers. The instrument was tested and validated.

Data Collection

The data has been collected through both online and offline mode as per the circumstances in different higher educational institutions offering varied streams of professional studies. The suitable samples felt for the study are the faculty members who are directly involved either in preparing curriculum and delivering sustainability related content to the students. The questionnaire was presented and sent via email to a total number of 288 faculty members among which 103 responses has been received indicating a response rate around 35%. But the study considers 90 responses as usable eliminating the rest because of its incomplete information. The survey data computation have been done and used for further result analysis.

4. Result Analysis

The measurement model

The mean and standard deviation calculated for each variable are presented in Table 2. Initially, Exploratory Factors Analysis (EFA) was employed to validate the variables of each factor. According to Lehmann (1988), the significant factor loadings derived by exploratory factor analysis demonstrate convergent validity, while the Cronbach alphas (α) indicate satisfactory internal consistency (Fornell and Larcker, 1981).The factor used to measure lack of awareness consisted of seven variables with Cronbach Alpha(α) 0.92. The structure of management education consisted of seven variables with Cronbach Alpha 0.92. The factor used to measure lack of resources present five variables excluding two variables, mentioned as lack of physical place (LR1) and technical problems (LR7) which were eliminated due to low factor loading (<0.5) with a Cronbach Alpha 0.91. Rest of the factor loadings as shown in

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Table 2 exceeds the threshold value of 0.5 (Lehmann, 1988) exhibiting acceptable measurement properties. At the same time, reliabilities for all three factors measured with Cronbach's alpha (α) were above 0.90.

Table 2:Descriptive statistics for the scales

Items	Mean	Standard Deviation	factor loading	Cronbach's alpha	Internal consistency	convergent validity (AVE)
LR2	3.478	.8770	.779	0.912	0.99	0.61
LR3	3.556	.8626	.634			
LR4	3.733	.7760	.728			
LR5	3.444	.8495	.918			
LR6	3.644	.8116	.819			
LOA1	2.80	.837	.642	0.928	0.99	0.63
LOA2	2.87	.864	.980			
LOA3	2.78	.832	.791			
LOA4	3.03	.867	.776			
LOA5	3.10	.912	.860			
LOA6	3.08	.915	.814			
LOA7	2.92	.838	.662			
SME1	4.067	.6500	.733	0.928	0.99	0.64
SME2	4.055	.6424	.742			
SME3	4.011	.6447	.922			
SME4	4.022	.6356	.933			
SME5	4.012	.6088	.860			
SME6	4.067	.6500	.641			
SME7	4.144	.6458	.732			

The discriminant validity of the factors was identified by examining average variance extracted (AVE) value and correlation estimates. The inter correlation matrix demonstrated that the square root of AVE for each factor is higher than the inter-construct correlations (see Table 3).The criteria of discriminant validity are satisfying, as AVE for all the three factors is above 0.60 and internal consistency is above 0.90 (FornellandLarcker,1981). The measures of internal consistency and convergent validity (AVE) were greater than the recommended threshold values of 0.70 and 0.50 respectively (Nunnally and Bernstein, 1994; Streiner, 2003; Hair et al., 2009), thus satisfying the conditions of the test.

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Table 3: Inter Construct correlations and square roots of AVE of constructs.

Factor Correlation Matrix			
Factor	LOA	SME	LR
LOA	**.780**		
SME	.323	**.800**	
LR	.593	.432	**.781**

Table 4 shows the fit statistics of confirmatory factor analysis for all the three factors. The examination of fit statistics recommends that the statistics of all the factors are almost within the recommended range indicating the acceptability measurement properties.

Table 4:Fit statistics for CFA for the factors

Fit Statistic s	**Overall Model**	**Lack of Awareness (LOA)**	**Structure of Management Education (SME)**	**Lack of Resources (LR)**	**Recommended Range**
Items	19	7	7	5	
(χ2)/f	1.554	2.9	2.7	1	(1-3)
RMR	0.035	0.035	0.019	0.014	<0.05
GFI	0.9	0.9	0.88	0.978	>.90
CFI	0.937	0.942	0.946	0.97	>.90
RMSEA	.07				<0.08

From the above analysis, it can be stated that the barriers with high impact on the incorporation process is found to be the institute policies lacking in sustainability orientation. It can be also added, that the faculty members do not want to contribute and participate in such process because they believe their assigned job is enough in itself and additional work may create shortage of time in their regular effort.

Overcoming the Barriers

These are the solutions drawn based on summarizing the answers responded to the open ended questions mentioned in the survey instrument by the respondents taken into consideration for

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the study.

1. Integrating sustainability issues into the multidisciplinary facet of the core subjects in the first year of every course, may it be professional course like engineering, medical, management etc. This will be fastest and a holistic way to deliver sustainability related content to all the students opting for higher education. This will induce a sustainable orientation throughout their course curriculum as it acts as a basic foundation for their further studies and specialization.
2. Faculty members are the referee with regard to the preparing, interpreting and delivering the curricular contents. They act as an ideal for many students who either try to imitate their practices and/ or follow the principles and teachings laid by their faculty model. Thus their roles become very important while integrating sustainability not only in curriculum but also to build a sustainable oriented future citizen. Any initiative seeking to promote sustainable development in higher education depends on the willingness and capability of faculty members. Capacity building for SD does not only require new or additional teaching staff but highly focuses on 'Educating the educators' existing in the academic institution. The training programme must be embedded in a special set of incentives so that additional time necessary to develop the subject matter and sustainability related didactical competencies are available with the faculty members.
3. Appreciation on the part of administration and by peer colleagues can also play a significant role than material incentives for the concerned persons involved in designing a modern and sustainable curriculum. It has been observed non financial incentives works more effectively than any other especially when it comes to teachers.
4. Restructuring the higher education curriculum by developing benchmark with those educational institutions which were found to be successful in integrating sustainability into the curriculum having a sound basis in the respective environmental and social sciences.
5. Education institutions are exposed to the different interests of various stakeholders, such as government, labor market and funding agencies. Experience shows that giving voice to and orchestrating the sustainability-related interests of different stakeholder groups can help key actors to build up pressure within and outside their institution to change for creating a bright and sustainable future.

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6. A sustainability declaration and guidelines by the higher education institution can serve as one of the major internal drivers for the faculty and other members of the institution to stipulate the meaning of sustainability by initiating discussions about its incorporation into the business curriculum.

5. Conclusion

In relation to incorporation of sustainable development into the university course, assessment of curricular changes and identification of the concerned person having the power to do such changes must be done. This paper has studied few educational institutions in India, offering professional courses and manifest their research oriented pedagogy and standard of education. It is evidenced that these institutions have shown their interest in incorporating sustainability throughout their course curriculum. A common list of barriers hindering change toward sustainability has been presented. The analysis has been carried out using EFA and CFA to validate the identified factors. The results shows that the barrier highly affecting the incorporation process is to be overcome lack of an sustainability oriented policies at institution’s level which reduce or give rise to the dearth of faculties interest and participation in this attempt.

Moreover, the faculty members should be allowed to be learners in this field. The presence of the present paradigms will otherwise continue to cause great barriers to change. To make such profound changes happen, not only institute’s support is sufficient, progressive leadership, external pressure and recognition call for sustainability integration in management institutions.

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Incremental Innovation for Sustainable Growth in Restaurant Businesses: Global Practices for the Growth of Local Business

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Abstract

With ever changing technological innovations, the paradigm 'perform or perish' has changed to adapt or perish. For every industry, it has become a norm to have an online presence. Being specific, it has become an unsaid rule to have mobile application based presence. Restaurant businesses couldn't stay away from this wave of change in the way people demand and consume services. From typical restaurant in corner serving to limited customers to a restaurant offering food on app based virtual environment, restaurant businesses are adopting the new age technological innovations to reach out and attract new customers. To reinforce the trust, they even submit to online monitoring of processes. From kitchen to billing, everything appears to be incomplete and obsolete without technological innovations. Keeping in mind that customer is the king, these technological innovations help businesses to cater the way their customers want it.

Keywords: Incremental innovation, attracting customers, restaurant businesses

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Incremental Innovation for Sustainable Growth in Restaurant Businesses: Global Practices for the Growth of Local Business

"Business has only two basic functions-marketing and innovation."

- Peter Drucker

It cannot be truer when even the visionary management thinker also says that 'business has only two basic functions-marketing and innovation'. Further he added that information revolution and industrial revolution both had great impact in economic history and both moved comparatively fast (Keegan & Bhargava, 2011).

These decades old lines are relevant in today's context when marketing and selling has become faster than ever before. With the innovation in mobile communication and information technology, marketing of services has changed drastically. So the consumers have changed their preferences, the way they had ever looked at shopping and consumed product and services. Service industry, particularly restaurant businesses also could not keep them away from the wave of change that recent innovations have brought. This again, forces us to talk about Peter Drucker's prediction about how the way we order food would change (In all recorded history there has not been one economist who has had to worry about where the next meal would come from (Ackoff, 1999)).

Today we live in an information age where-in everyday we get to see innovative products and services at our disposal, making things easier and convenient than ever before. Today's technology is about staying connected. Not only the people, but also various devices are connected with each other communicating and working smartly as the user needs. Witnessing this connected world of people and devices, the businesses could not keep themselves away from this network of opportunities.

In this paper, researcher talks about use of incremental innovation in restaurant businesses. Restaurant businesses fall under hospitality industry. It employs different types of employees, from chefs, waiters to managers. It allows customers to enter, order food, and eat on the premises (Wisegeek, 2015).

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Gone are the days when we had limited information about the best offers, best cuisines and best restaurants in the vicinity. Today, the information about everything is literally at the figure tips. Anyone is free to order from home, office or anywhere, read reviews, avail offers and grab best of the deals.

The world of globalization, liberalization and privatization posed its own opportunities and challenges. Though there are tremendous opportunities present in today's world, but at the same time on the other hand there is a tough question of survival. Innovation is that tool of survival which provides businesses the competitive advantage needed to survive in such cut throat competition. It can be said as an answer to all major contemporary challenges.

The Organization for Economic Co-operation and Development (OECD) defines innovation as "new products, business processes and organic changes that create wealth or social welfare" (economist.com, 2015).

Defining incremental innovation in restaurant businesses

Innovation is something which is not just limited to developing ideas creatively. We define Innovation as the "commercialization of new products, services, or ideas" moreover, to be successful in long run it needs to be continuous. Incremental innovation is about using existing knowledge, continuously improving existing product or services. Japanese approach Kaizen is discussed as an example of constant efforts to make products or services more effective and efficient with focus on reducing cost and improving quality (Harold Koontz, 2015).

Innovation in restaurant business is defined as something different that a restaurant does, even if it is taken from competitors or inspired from existing products or services (Johannessen, 2001). Incremental innovation is about gradual growth resulting often from use of new technologies (Damanpour, 1996).

There are ample definitions of innovation and particularly incremental innovation in general. However, not enough attempts are done to specifically define incremental innovation in restaurant business. So on the basis of existing literature review, we can operationally define incremental innovation in restaurant businesses as a new approach in attracting and retaining

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the customers and best use of available technology to optimize the businesses processes which results in sustainable growth for a restaurant business. This paper focuses on exploiting an existing innovation for sustainable growth particularly in restaurant business.

Review of Literature

A visionary economist of 20th century Joseph Schumpeter talked about innovation and entrepreneurship in those days when people never thought about social media and businesses through information technology. What he preached and practiced about innovation and entrepreneurship seems to be relevant even in today's context for sustainable business growth. He emphasized that entrepreneur's must be creative, innovative and goal-oriented. Schumpeter defines entrepreneurship as "the function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on" (Schumpeter, 1976).

In developed countries the main provider of gross national product comes from services and services are recognized as a critical factor for the growth of the economy. As services importance grew and the arena for innovation has made its ground in services also, they are no longer thought as secondary from the perspective of innovation (David B. Audretsch, 2011) . Initially services were thought as the consumer of innovations, occasionally imitators of or facilitators to innovations of manufacturing firms (Tuominen, 2009). According to Marja Toivonen & Tiina Tuominen, in their paper titled "Emergence of innovation in services" services differ from manufacturing in several ways. Firstly, services innovation is not the results of deliberate activity and generally they emerge in the process of service provision on the basis of clients' need and are recognized as innovation only at a posteriori. Secondly, as services are simultaneous to both product and processes it is difficult to apply the common classification into product, process and organizational innovation. Lastly the 'fuzzy' nature of output of services makes it difficult to realize when the change has taken place.

The scarcity or lack of studies in services is due to the presence of many specificities of this sector, for example its heterogeneous nature. The service sector is a sum total of many sub-

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sector each having different needs for different inputs. There is no idiosyncratic or distinctive formula in case of input-output process, and even quantification of inputs or outputs is strenuous. Due to intangible nature of services, their simultaneous production and consumption, inability to store them, low tradability and unique role played by customer and producer are some features that make measurement studies in services extremely difficult (Cesaltino Pacheco Pires, 2008). Even defining innovation with respect to services is brimful with difficulty. Sundbo & Gallounj defined service innovation as more an incremental innovation which are generally based on small adjustments of procedures and are seldom radical and dimensional in nature (Sundbo, 1999).

In their research paper titled "Exploring innovation strategies that affect business performance in restaurants " Russell , Michael and Hugh were of the view that both radical and incremental innovation are important but it is the incremental innovation which is the pivotal for the growth of restaurant business (Russell Cox, 2011). According to them there are four important areas of incremental innovation in restaurant business which includes product and service, marketing, processes and organizational culture. Another important point of the study reveals that suppliers also play an important role in influencing the menu innovation. They also came with a strong conclusion that each and every element of the business needs a change to be completely feasible.

Research gap

While most of the researchers who researched on incremental innovation in restaurant businesses, talked generally about menu innovation, staff training, marketing and kitchen developments in general. However, this paper tries to specifically provide an insight on how latest technological interventions as an incremental innovation can be useful in sustainable growth in restaurant businesses.

Technological interventions as an incremental innovation:

Today, restaurant businesses have adopted many technological innovations for improving efficiency and enhanced user experience. Tasks like online order processing, webcam enabled monitoring, and billings are digitalized. Technological innovations are improving the way

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restaurants have been doing their businesses. From billing to kitchen, everything can be technologically equipped for improved efficiency and consumers' convenience.

Following is the consolidated review of different technologies at restaurant business managers' disposal, which can help speed up the activities, avoid different types of waste, efficiency in monitoring, convenience in many ways and much more (Pullen & Forbes.com, 2012).

Digital menu boards and smartphones: Boston-based Mexican food chain Boloco's digital signboard provides both entertainment and interactivity while customers wait for their turn. This signboard allows regular customers to play tic-tac-toe game against friends or with computer while they wait.

More games while you wait: Going ahead with the commitment of family friendly restaurant, McDonald's project gesture enabled games on floor for kids to play while they are waiting for their Happy Meals. Now as we know that the kids will be happy, their parents will apparently be happy who will revisit you're your restaurant.

Online coupons: It appears to be a practice in many countries now that they provide online discount coupons to attract customers. In India, websites like groupon, couponguruz, dealsandyou, etc. offers lucrative offers through coupons which they can redeem to get discount or avail a scheme.

Mobile app based ordering: This seems to be a hot trend in recent times as many restaurants either have their own dedicated app like Domino's provide or they take services of daily deal aggregators and facilitators like Foodpanda, Just Eat, Faaso's, etc. Mobile app based ordering provides convenience to customers as they can order food from anywhere, they get payment options like cash-on-delivery or online payment and meanwhile they may also avail discounts offered by deal aggregators. While on the other hand restaurants get more business and wide exposure.

Webcam-Enabled Monitoring: Health related concerns being at the top of the customers' mind, restaurant businesses have adopted technological innovations like high quality cameras and advanced algorithms to reinforce the healthy practices in kitchen and while serving. Now

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there are equipment in market which can smartly detect the noncompliance with health regulations and safety procedures.

In U.S., during trials at healthcare facilities, employees wore identification badges with radio frequency transmitters which alerted system and tracked workers for the desired sanitary practices. It also monitored if the workers are wearing gloves and hats while handling food.

Conclusion

Incremental technological innovations have changed the way restaurant businesses handle the food, cater the customers, monitor processes and how they attract and retain customers. Technological innovations have facilitated those who have adapted according to changing times and who have adopted such innovations. It made their businesses suppler, aggressive in marketing and provided a lot of convenience to both the customers and service providers.

Recommendations

For sustainable growth, restaurant businesses must exploit latest suitable and beneficial technological innovations. It would help them to be a part of current trend in the industry which the customers also find convenient and beneficial to them.

Technological innovations like process monitoring technologies help the businesses to reinforce the trust among customers about best health and other relevant practices at the work setting.

Last but not the least; it appears that those who don't adopt such technological innovation seem to slowly compromise with their growth and eventually perish. So in this context the paradigm 'perform or perish' turns out to be 'adapt or perish'.

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The Constraints of Tourism Development for a Cultural Heritage Destination: The Case of Karnataka State

K. Selvakumar[1] and Dr.S.Thangaraju[2]

Abstract

Cultural Heritage tourism has recently been approved as a growing segment of tourism in business and research circles. A Cultural Heritage tourism system is described with emphasis on the fulfilment of the expectations of visitors ranging from spiritual pilgrims to secular tourists tourism attractions because of various combinations of historical, artistic, and scenic site characteristics. The purpose of this specific paper to investigate this factors which could add on the enlargement with the traveller expertise in addition to even though you will find there's vacation possible, you will find problems that needs to be resolved in order to market vacation inside the state, and tell holidaymakers with the appearance in this historical place. For example, removing difficulties, crime, decrease in authenticity, in addition to the deficiency of details, features in addition to traveller providers in your community. Besides the possibility associated with bringing in revenue, vacation progress inside the state could also produce this availability in addition to rebirth with the social- cultural traditions associated with its group.

Key words : Tourism, Culture, Religion, Karnataka, Handicraft

JEL Code : L83,Z10,Z12,R10,H41

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Introduction

Tourism is one of the most sizably voluminous industries in the world contributing 9% to the global Gross Domestic Product (GDP), and this sector has been identified as a potential income-engenderer and economy-diversifier in all over the world. This is verbally expressed in a number of official documents including national development plans and tourism master plans of the country in the UN WTO 2013 report.

Karnataka's cultural heritage and its contribution to the field of art, music, religion and philosophy are well apperceived. Mysore, Hampi, Shravanabelagola, Belur, Halebid and Bijapur are some of the consequential historic and cultural centres in Karnataka. Karnataka is well endowed with natural resplendency especially along the Western Ghats; the state has the potential to become one of India's major tourist destinations.

Kannada is one of the four classical languages in the country and occupies a consequential position in Indian history. A comprehensive understanding of the country's history and culture is highly desirable, for which opportune study and analysis of both Aryan and Dravidian traditions are consequential. It is, therefore, critical to promote Kannada by denotes of preservation of its literature and the language itself.

Karnataka State possesses sundry alluring spots of natural comeliness and affluent cultural heritage. There is an array of archaic sculpture site of heritage value, breathtaking landscape, exotic wildlife, temple towns, Heritage sites, Temples, Forts, Sandalwood Forests, Coffee plantation, Water Falls, Wildlife, Western Ghats, Hill Stations. In this background, there are ample opportunities for tourism in Karnataka having traditional tourist spots, temples with good sculptural glory, religious places, seashores with spectacular comeliness Malnad area and good climatic conditions. In the year 2010, Karnataka ranked fifth among States as a tourist destination with around 3.8 lakh international and over 382 lakh domestic tourists visiting the State. The State has the second-highest number of for fended monuments in the country (507 centrally and 750 adscititious bulwarked by the State Governments) to nature and wildlife –

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there is much to draw the tourist to Karnataka.

Karnataka is the country's fifth most popular tourist destination. With the most astronomically immense number of institutes in hotel management and catering technology in the country, the State has an immensely colossal pool of adroit human resources. The Sector is magnetizing consequential investment by domestic and global players as infrastructure is being ramped up to meet the desiderata of the growing tourist activity. Through the Karnataka Tourism policy 2009-14, the state regime sets a vision to promote tourism as Karnataka's principal and most sizably voluminous economic activity, as an employer, revenue-engenderer and engine of magnification, by being among the top two tourism destinations in India.

Methodology:

The research study includes both the primary and secondary data sources. The major data and information pertaining to the research study have been accumulated from the primary sources. The main sources of primary data were personal visits to cultural & heritage sites and their observation. The secondary sources, the main source of secondary data was a Ministry of Tourism, Government of India including the Department of Tourism & Culture, Government of Karnataka and its cognate departments, books, journals, portals and newspapers.

Objective of the study

This paper accommodates to examine the status of Karnataka state in the context of tourism orchestrating and development. It will analyse the present constraints that may obstruct or obstruct the progress of the tourism industry, and conclusively, discuss the prospect of Karnataka as a tourist destination in benefiting the economy and society, and in advancing the sustainability of the cultural heritage of Karnataka state.

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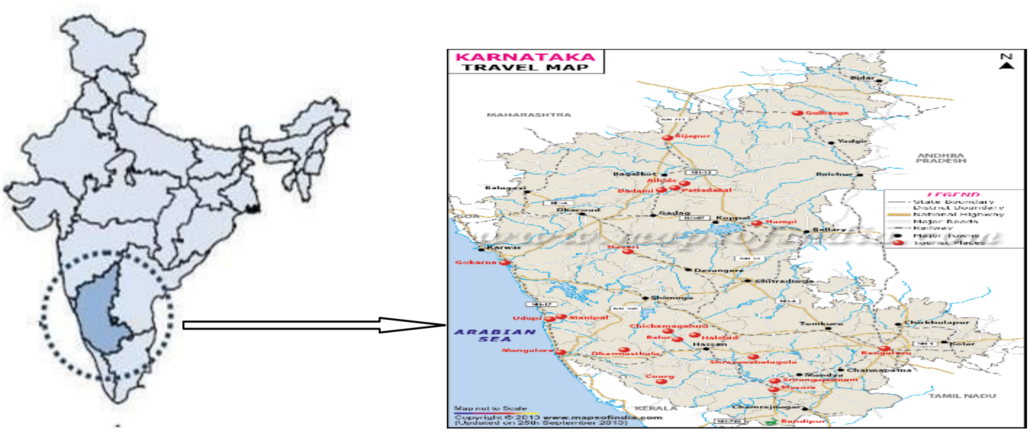
Study area



Karnataka as a tourism destination

What is the attraction that makes Karnataka a tourist destination?

Karnataka with its great Heritage and Cultural Background has astronomical potential for the sustainable development of tourism industry. State Government has declared 'Tourism as an industry' since 1988. The Department has brought out a series of Tourism Policies with the package of incentives, concessions and subsidies for development of Tourist Infrastructure in the State through the private investment. Tourism has been given priority and it is instrumental for Socio- Economic magnification of the State as well as providing lot of employment opportunities for both adroit and maladroit man potency. The tourist flow in to the State has been incrementing steadily in the last decade.

In view of integrated development of tourism, the State regime has promulgated incipient tourism policy for 2009-14. In the overall period of this policy (5 years), it is estimated that Rs.25,000 crore of private investment will be invested in the tourism sector. And in the same period 29 to 41 lakhs of employment opportunity will be engendered. To minimize the financial burden, the PPP scheme has withal been introduced to magnetize more number of mega investors. Revenue realised by the tourism in Karnataka by the three organization viz., Directorate of Tourism, Jungle Lodges & Resorts Ltd. and Karnataka Tourism Development Corporation during the year 2007-08 was Rs 62.77 crore and it was Rs 68.98 crore in the year 2009-10.

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Broadly, tourist destinations in Karnataka can be divided into the following

Source: Collection of Domestic Tourism Statistics for the state of Karnataka Annual Final Report

By Acnielsen org-marg pvt. Ltd New Delhi

- Heritage Destinations
- Natural and Hill Destinations
- Wildlife Destinations
- Coastal Destinations
- Cultural Destinations
- Adventure Destinations

Five circuits have already been identified by the Government of Karnataka to develop tourism infrastructure and in order to identify new tourism destinations. Apart from these five circuits, as apart of their on-going activities to boost up tourism sector in the state, they are also trying to develop some more attractive tourist circuits. However, these are yet to be given a concrete shape. The five circuits which have been already identified by the state government are as follows:

1. Northern Circuit
2. Southern Circuit
3. Coastal Circuit
4. Wildlife Circuit
5. Hill Resort Circuit

Northern Circuit

The Northern Circuit consists of Northern Districts of Karnataka namely Belgaum, Bijapur, Dharwar,Bidar, Gulbarga, Raichur, Bellary and Chitradurga. Once the capital of the early Chalukyan dynasty(6th to 8th centuries), Aihole and Patadakal (Bagalkot District), are picturesque villages on the banksof the Malaprabha river and are historically famous as the cradle of Hindu temple architecture builtbetween the 6th & 8th centuries and some even earlier. Badami is known for its rock-cut cavetemples. Hampi - a world heritage centre which

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is the ruins of the great capital of Vijayanagar dynasty is also a part of the circuit.

Southern Circuit

The Southern Circuit consists of Districts of Bangalore, Mysore, Mandya, Hassan, Kolar, Shimoga,Chikmagalur and Tumkur. The southern circuit includes Bangalore, the capital of Karnataka.Bangalore ranks as one of the fastest growing cities in Asia and is also known as "Garden City ofIndia" “IT Hub” etc. Mysore is also known as the City of Palaces and the political capital of the Wodeyar dynasty. Mysore City also possesses a number of gardens, shady avenues and sacredtemples. Carnatic Classical music and dance is also a prominent aspect of the city. The other majordestinations of the circuit include Srirangapatna which was once the capital of the warrior king Hyder Ali and his son Tipu Sultan.

Coastal Circuit

The coastal circuit consists of the coastal districts of Uttar Kannada, Udupi and Dakshin Kannada. Uttar Kannada is considered to be the eco-tourist’s paradise is a place of immense natural beauty. Itswide variety includes Beaches, Wild life sanctuaries, Scenic views, Adventure sports, Rock climbingand also religious shrines. Dakshin Kannada is surrounded by the soaring Western Ghats and ArabianSea, the district is blessed with lush green vegetation, abundant rain fall, beautiful beaches,picturesque mountain ranges, temples and many more.

Wild Life Circuit

The wild life circuit consists of Wild Life Sanctuaries, National Parks and Bird Sanctuaries. There are 5National Parks, around 22 Sanctuaries and around 3 Jungle Lodges and Camps. Bandipur NationalPark nesting in the foothills of the Nilgiris, Kabini -situated amidst the Kharapur Forest, Kabini is thepristine pieces of land that abound with nature.

Hill Resort Circuit

The Hill circuit covers the Hill stations of Mercara, Kemmannagundi, Kudremukh, Male Mahadeshwara Hills, BR Hills, Sandur, Nandi Hills and Jog Falls.Madikeri or Mercara, the districtheadquarters of Kodagu (or Coorg) also known as the Scotland of India, is gradually catching up asone of the most sought after Hill stations of the country.

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A visit to indiais not complete without visiting Karnataka state. This is a common expression conveyed to tourists visiting the country. Karnataka is thus one of the mandatory destinations for tourists in Brunei Darussalam, synonymous with the Great Wall in China, Eiffel Tower in France, pyramids in Egypt, and windmills in The Netherlands.

Constraints to tourism development at Karnataka

Although cultural tourism has the potential to be further developed state, there are a number of challenges and threats that need to be addressed to prevent the disappearance and its heritage and lifestyle. It is essential that these issues are considered in order to avoid the adverse impact of tourism in this region, and thus to promote tourism activities in region and convince the tourists of the distinctiveness of this historic place. These challenges and threats include problems of waste disposal, fire disasters, crime, and the authenticity of Kampong Ayer, as well as the problem of lack of information, Facilities and tourist services in tourist destination.

Crime and drugs

Malefaction and sexual harassment activities that transgress the law such as the distribution and abuse of drugs, larceny and illicit immigrants in state are increasingly rampant and the situation is worrying the ascendant entities and local communities. Police raids are frequently held in state in order to combat these illicit activities. For example, Bangalore has reported the highest incidence of cheating (3,155 cases), larceny (783 cases) and 'preparation and assembly for dacoity' (342 cases) among the mega cities. It additionally features among the police districts that have recorded more than 10,000 IPC malefactions during 2011 with 30,283, and ranks third in the list, just behind Ernakulam (Rural) and Mumbai. Another worrying statistic is that of reported 'violent crimes', where 11.8 per cent of the total malefactions in Karnataka were relegated as bellicose. This accounted for over 10,000 reported cases last year.

News on this matter would taint the image of the state, as well as that of the country, which is well-known for its stability, peacefulness and friendly people. Personal safety is certainly a major factor for any traveller to make decisions and choices about the places to be visited. If a place is not safe and there is a crime, tourists will certainly avoid it. Studies have shown that in recent years, safety and security have become one of the most perceived inhibitors that avert

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prospective tourists from travelling to their preferred destinations.

Loss of authenticity

Karnataka has an affluent and diverse heritage that is an integral part of the national heritage. It encompasses sundry aspects of the human civilization and represents a cultural as well as natural heritage of national and international value. However, for sundry reasons, the value of this heritage has not always been recognised. Thus, entire portions of the state's heritage were disoriented, and are often threatened by the impact of natural forces (rain, wind, vegetation etc.) or transmutation in conditions of its aegis and maintenance. This necessitates that this state wealth in the form of architecture, arts, folklore and natural comeliness be accurately and purposefully documented and preserved.

Heritage can be divided into two main categories. On the one hand, there is a heritage that presents itself in a material, tangible form: archaeology, art, movable objects, architecture, landscape and biodiversity (both the animal and plant forms). On the other hand, intangible cultural heritage encompasses cultural expressions such as dance, oral literature, local customs, and other rites and rituals.

The preservation of this heritage has to be a collaborative effort amongst and between the states regime, local communities, artists and citizens of the state. While the regime has the legislative potencies, the local community and citizens have the capacity to identify their own heritage; heritage will remain coherent and pertinent as long as it remains alive in the context where it originated

The documentation of this cultural heritage is a fundamental step for gaining a general conception of its richness and diversity. The main purport of this exercise is to engender a compilation of documents relating to the state's cultural heritage, and to make this accessible and available to apprise and sensitise the general public as well as guide decision makers on development issues at the cultural, economic and gregarious levels. A comprehensive documentation of cultural heritage should encompass all types of heritage whether movable or immovable, tangible or intangible.

Most of the artisans are incognizant of the institutions established to avail them with aspects

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ranging from design, technology, credit availability, marketing, packaging etc. Due to their dispersed and remote location and constrained inculcation, most artisans and weavers lack information on paramount market and customer trends, as well as regime initiatives designed to address their desiderata. A recent study by the National Institute of Science, Technology and Development Studies found that artisans customarily lack information relating to:

New markets available for their products

- Appropriate market rates for their product
- Market potential of their products
- Rates of raw materials used by them in various markets
- Government schemes instituted for their welfare
- Diversification and value addition to their products

Establishing Artisans & Weavers Service Centres (AWSC) at the district level will make such information accessible at the district level and avail the artisans and weavers in their economic and convivial development.

Karnataka has a diverse range of handicrafts that showcase the state's affluent and diverse culture and age old heritage. Handicrafts and diminutive-scale industries represent an astronomically immense and dynamic segment of the manufacturing sector, characterised by high labour intensity and scattered presence. At the national level, handicraft is the second highest employer, behind agriculture, employing a majority of women and persons from economically rearward classes. Apart from high employment potential, this sector is economically paramount due to its low capital intensity, high ratio of value integration and high exportability and peregrine exchange earning potential.

Lack of information for tourists

Information plays a consequential role to magnetize the attention and interest of tourists to visit a destination. It is desirable if tourist-cordial information relating to the history of state is provided. The Tourism Development Division or peregrinate agents should strive to publish a brochure concretely about the cultural heritage of the state, which should be simple and clear to understand and practical for tourists. This brochure should include an adumbration map of state

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together with information relating to the history, places of interest, activities that can be done by tourists, the expedient to visit, and the materials that can be obtained as a keepsake in the state.

Lack of facilities and services for tourists

It is important that tourists are satisfied with their visit to a destination. Basic needs such as tourist lodges or hotels, resting huts, clean toilets and eating places, as well as safe jetties should be available to convince tourists to visit Kampong Ayer. Apart from the state of infrastructure, tourist services such as guides who are knowledgeable about Kampong Ayer need to be provided as well. It is observed that local people still shy away from the tourism industry in the country such as providing guide services. Travel agents still hire foreigners to provide guide services to the tourists. More than 27% of the state population consists of migrant workers, while as much as 4.9% of the Brunei nationals have been unemployed (Tasie, 2009). As a result, there is still a lack of guides who are capable and knowledgeable to provide their services to tourists interested to visit Kampong Ayer. Professions such as tourist guides can be done on a part-time basis, which can bring additional income to the individuals.

The impuissance of Karnataka as a tourist destinations are as follows

- The image of Karnataka as a Technology Capital of India than a Tourist destination amongst both Indians and peregrine tourists
- Most of the major destinations are stand alone and far off from Bangalore
- Poor accessibility to many tourist destinations due to rudimentary Infrastructure bottlenecks
- Lack of tourist infrastructure & rudimentary amenities at many tourist destinations
- Lack of information about tourist destinations
- Limited vigilance among local community and misconceptions that tourism will bring environmental and gregarious quandaries
- Unaggressive marketing and promotion of the tourist destinations
- The ascendant entities should additionally identify routes that can be utilized by tourists. This tourist route must traverse areas that could showcase the cultural heritage of state. Armed with simple and clear information, through brochures, signs or other audio

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contrivance, the tourists will be able to follow the description of the history, patterns of culture, tradition and life in. With this tourist route, it will constrain the areas visited by tourists, and reduce disruption and negative effects on the residents of state.

Tourism prospect

The state has the potential to be a tourist destination that engenders financial benefits or income to the country, in general, and to the community as well as dwellers, in particular, but additionally maintain, preserve or revive the social-cultural heritage of the state.

Local residents should be inspirited to venture into the tourism industry. As the residents themselves are more acclimated with their strengths and opportunities, as well as their impuissance and threats, they are in a more preponderant position to shape and offer the products and accommodations felicitous for the tourists. Thus, there is potential for the residents to provide conveyance and guide accommodations for the tourists in the state. Career in the peregrinate industry can provide an opportunity to earn a living and avail reduce the unemployment rate in the country.

Improving the fundamental amenities at all sites of tourist/ religious interest to enhance the overall tourism experience and build an auspicious perception in the minds of tourists. This will enable the state to achieve the Vision 2020 goal of incrementing the number of domestic tourists visiting the state from 1.1 crore to 3 crore and number of peregrine tourists from 5 lakh to 25 lakh. Fully explore the tourism potential of the state, and make tourism one of Karnataka's largest economic and employment contributor as envisaged in the State Tourism Policy. This will enable the state to increment the number of persons directly employed in tourism from 1.56 lakh to 5 lakh to meet the goal set in Vision 2020.

By involving the local community in the tourism development in state through exhibitions, dance and cultural performances, and cuisine, this will appeal to the people of Karnataka to identify and understand their culture and tradition that have not been practised. Indirectly, this activity will revive and thus preserve their cultural values. This was demonstrated in a study of tourism development in Merimbun Heritage Park, an ecotourism site in Brunei Darussalam, where locals have been involved in traditional activities such as weaving. This has led to providing a livelihood to those who do not have a fixed job including mothers and the elderly

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(Ahmad, 2011). Because the activity of weaving was never practiced by the young or was less practiced by the elderly, those who are now involved in these activities are not only of the opinion that weaving can produce woven materials for sale to tourists, but also at the same time, it is reviving a local tradition that was once abandoned. Weaving activity also appears to have succeeded in generating awareness particularly among the youth of the community. With the involvement of young people, it will ensure that the traditional skills will not disappear, and thus, will continue to be inherited by future generations.

Conclusion

Karnataka state is prominent as a captivating tourist destination for visitors to travel in India. It offers the charm of culture, history, traditions, customs, notion and life of the country that is unique. However, pollution from the indiscriminate disposal of waste, hazards, malefaction, loss of authenticity, lack of information, and lack of facilities and tourist accommodations in the state are several factors that can affect and challenge the progress of as a tourist destination.

The heritage of Karnataka state needs to be preserved. The ascendant entities need to perpetuate to ameliorate the quality of life in heritage sites in order to embolden the inhabitants to stay living in their native place. As a national heritage, needs to be for fended against a more dynamic and sophisticated development. To make it as a model of development of a modern city, it is time to invest in heritage destinations' potential as tourist destinations with infrastructure, facilities and accommodations that meet the desiderata of peregrinates.

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The Problems of Coastal Tourism, Environment and Local Sustainable Development along Sindhudurg District, Coastal Maharashtra India

Yogesh Pisolkar[1] and Navendu Chaudhary[2]

Abstract

India has a long coastline of about 7,500 kilometers, with an exclusive economic zone (EEZ) of 2.02 million square kilometers. The state of Maharashtra is located on the western side of the Indian Peninsula. The state has 720 kilometers coastline. Towards the southern end of Maharashtra coastline lies the Sindhudurg coastal district. Situated between latitudes 15^0 37' and $16^0$40'north and longitudes $73^0$19' and $74^0$18' east, Sindhudurg district has a coastline of 121 kilometers. Apart from the beautiful pocket sandy beaches, island & inland ports,the coast is also known for built heritage, local culture and Malvani cuisine. The area has rich coastal and marine biodiversity. Ecosystem services are extremely important for the sustenance of livelihood of local people. However, coastal tourism has picked up in a most unplanned manner in last two decades in three coastal districts Deogad, Malvan, Vengurla of Sindhudurg district. The paper starts with the key statements by some of the reputed organizations and committees observations and suggestions on coastal tourism. The past experiences and directions along the Sindhudurgcoast has been assessed. Some gaps & problems perceived by auothers in the study area are enlisted. Being geographers, the authors' experience is largely conditioned by the geomorphic backdrop and spatio-temporal change in both physical &socio-cultural environment of the study area. Problems as seen by the authors may have solutions from other parts of the world. Some site specific solutions are suggested by the authors.

Key words – Coastal Tourism, Environment, Sustainable Development(SD), Ecosystem services, Livelihood.

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The Problems of Coastal Tourism, Environment and Local Sustainable Development along Sindhudurg District, Coastal Maharashtra India

Introduction

There is no single definition of the coast. The literature refers to the coast, coastal area, coastal zones, and so on. Some authors refer to the coastal zone as '…. that part of the land most affected by its proximity to the sea and that part of the ocean most affected by its proximity to the land …'(Hinrichsen[1996] quoted in Burke, Kura, Kaseem, et al 2000) However in India "***Coastal Zone***" means the area from the territorial waters limit (12 nautical miles measured from the appropriate baseline) including its sea bed, the adjacent land area along the coast, and inland water bodies influenced by tidal action including its bed, upto the landward boundary of the local self government or local authority abutting the sea coast, provided that in case of ecologically and culturally sensitive areas, the entire biological or physical boundary of the area may be included, as specified under the provisions of Environment Protection Act, 1986 (MoEF,2008)

Coastal Tourism and Ecosystem Services

India's coast and coastal tourism has always been the focus of the domestic as well as international tourists with their own demands.Coastal tourism has an important spatial dimension as it integrates local people, geomorphology and ecosystem services for benefits of tourism.

Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services suchas flood and disease control; cultural services such as spiritual, **recreational**, and cultural benefits; and supporting services, such as nutrient cycling, that maintain the conditions for life on earth. Global changes and a range of drivers are causing degradation or loss of ecosystem services. Coastal and marine ecosystems are among the most productive, yet threatened, ecosystems in the world; they include terrestrial ecosystems (e.g., sand dune systems), areas where freshwater and saltwater mix, near shorecoastal areas and open ocean marine areas.Fig 1, (UNEP, 2006)

Fig1.Millinium Ecosystem Assessment (MA) Conceptual Framework of Interactions Among

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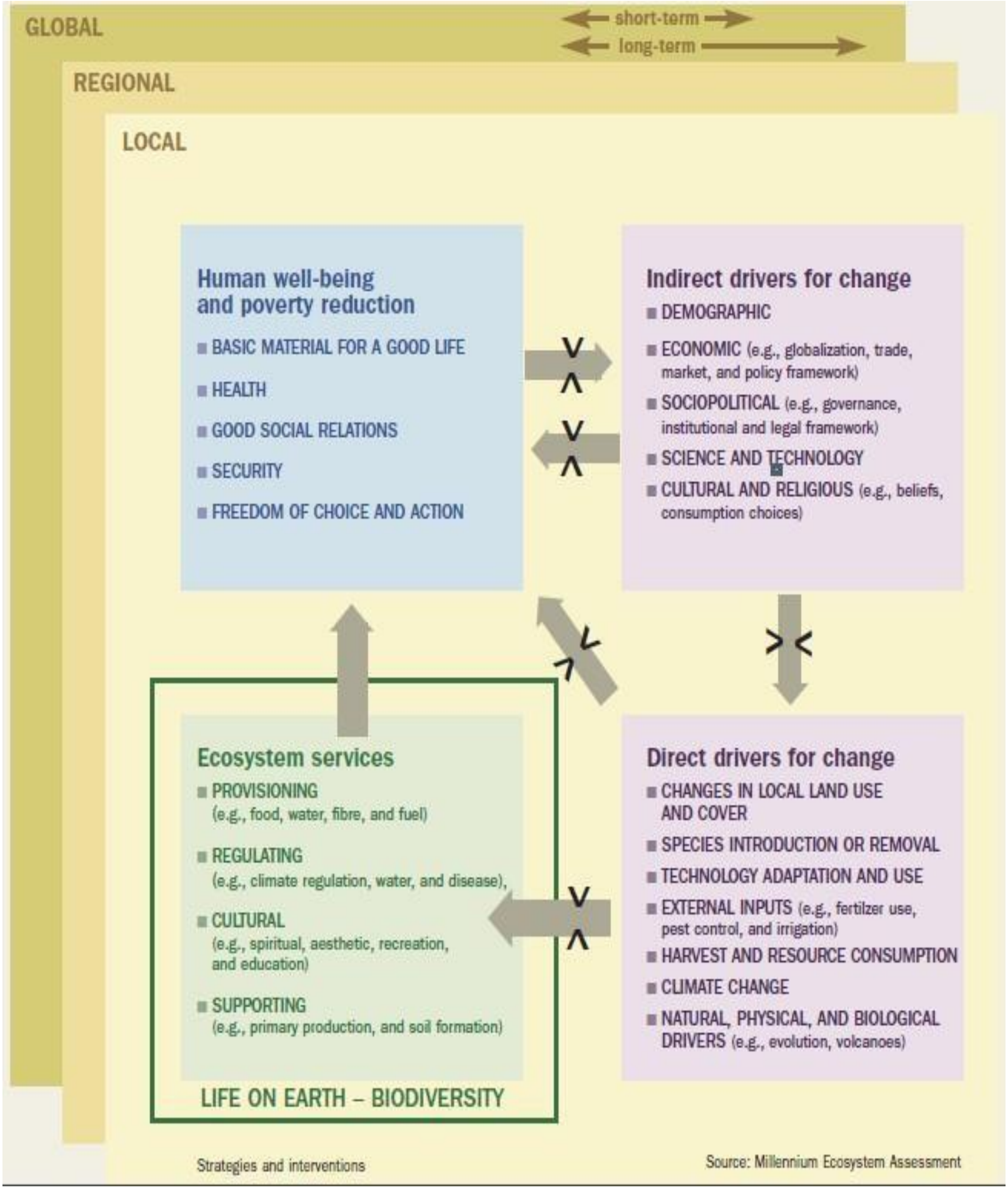
Biodiversity, Ecosystems Services and Human Well-Being and Drivers Of Change.



Source : UNEP – 2006

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Literature review

The Sindhudurg Coastal and Marine Ecosystem (SCME), located on the west coast of India (Maharashtra) is one of the 11 ecologically and economically critical habitats identified along the Indian coast. Critical habitats include: rocky shore, sandy shore, rocky island, estuaries, mud flats, marshy land, mangroves, coral reefs, and Sargassum forests. There are 367 species of marine flora and fauna reported from the area which include 73 species of marine algae, 18 species of mangroves, 11 species of coral, 73 species of mollusks, 47 species each of Polychaetes and arthropods, 18 species of sea anemones and 74 species of fishes. Globally significant species include Whale shark, Indo-pacific humpback dolphins, Olive Ridley, Green and Leatherback turtles, and corals. Avifauna presents 121 species, including 24 true migrants. Vengurla Rock is an Important Bird Area (IBA). The area has a rich repository of corals, with the recent discovery of a large coral area in Angria Bank. Due to its high ecological importance, 29.12 sq. km of SCME was designated as the Malvan Marine Sanctuary (MMS) in 1987 and is one of seven marine Protected Areas in India. SCME has enormous economic significance as well, being one of the major fish landing centers, and as a rapidly emerging tourism destination. The primary drivers of ecosystem degradation in the SCME include unsustainable fishing by trawlers, an expanding tourism sector, and pollution from fishing vessels and other maritime traffic. Agro-chemical and industrial pollution are relatively limited at present but a precautionary approach is warranted, and climate change poses an impending threat. The existing institutional arrangement in the SCME is inadequate in addressing these issues from a landscape perspective (UNDP, 2011)

United Nations Development Program & Global Environment Facility (UNDP-GEF) along with implementing partners and responsible partners Ministry of Environment and Forest(MoEF Government of India), Forest Department, Government of Maharashtra respectively is working on a project – Mainstreaming Coastal and Marine Biodiversity Conservation into Production Sectors in the Sindhudurg Coast, Maharashtra, India with the total budget of US$15,438,294. The UNDP-GEF intervention aims to address this through the following outcomes: (1) Cross-sectoral planning framework that mainstreams biodiversity conservation; (2) Enhanced capacity of sector institutions for implementing biodiversity-friendly fisheries management plan, ecotourism management plan and MMS management plan; and (3) Sustainable community livelihoods and natural resource use. By the project end, it is envisioned that production activities in at least 6,327 sq. km of SCME mainstream biodiversity conservation objectives, in turn improving the conservation prospects of critical

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species and ecosystems, apart from contributing to the sustainable development of the region. (UNDP, 2011, 2013)

It is also clear that coastal areas are the habitats of fishing communities. These communities are in double danger as well – ironically, from conservation and from development. On one hand, these communities are marginalized and even alienated from their lands because of the need for conservation in marine parks or forested islands. And on the other, they are in jeopardy because of large development projects which displace them and take over their lands and livelihood. Their land is prized today for tourism and high-end housing projects. Future policies for coastal area management must reverse these trends and find approaches to conserve and protect vulnerable ecosystems and secure livelihoods and habitats of its people. This is the challenge. (Swaminathan et.al, 2009)

Use of satellite and information technology to map the coast and to monitor real-time violations of that are taking place. This mechanism has been used in the case of the State of Goa where, based on a decision of the Hon'ble High Court Bombay,the government undertook mapping of the entire coast to identify violations. (Swaminathan et.al, 2009)

Problems with coastal tourism in Sindhudurg

Recent field visits and observations in the study area by authors have identified following gaps and persistent problems of Coastal Tourism, Environment and Local Sustainable Development along Sindhudurg District -

1. Temporal changes and its impact on Land Use and Land Cover (LULC) with respect to habitats is not mapped. The reconnaissance of Gram Panchayat and District Collector's office revealed that no survey has been undertaken at least since 1961.
2. Cadastral maps (revenue maps) are not Geo-referenced. Hence mapping of change in respective survey numbers (i.e. New hotels, Homestays, infrastructural development, etc.) are a challenge. The cadastral maps date back to British Era are still not comprehensively surveyed. The survey is proving difficult as no authorized survey marks can be located.
3. The nature of the changing coastline (eroding, accreting) & mapping of the same on a cadastral map has not been done. Sand is removed from the beach sand dune system for construction activity without any systematic mapping or monitoring (Pisolkar, 2013) Coastal Creek management using sophisticated GIS technology is possible, but currently non-existent. This work is currently being undertaken by the authors.
4. Mechanism to develop capacity building and skill development of staff & hotel owners is

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lacking. Detailed facility inventory is required for sustainable planning.(John Holiday 2013)

5. The local traditional fisherman is getting marginalized due to commercial trawlers and persian net fishing. The number of *'Rapan Sangh'* (group of traditional fisherman) and members in it has decreased considerably in the last decade. Fishing grounds are neither mapped nor regulated, leaving the stakeholders unaccountable. (Ujjani,2014)
6. Along the coast there is a rich repository of corals which is one of the main tourist attractions now**. 'Scuba Diving'** and **'Snorkeling'**especially near Sindudurg Fort, Malvan rocks give an easy and affordable option to both - service providers and tourist. However, there are no guidelines & training for safety of tourist, dress code& code of conduct, and most importantly authenticity of the majority of service providers.
7. Coral are very fragile.Scuba divers (service providers) and Tourist are making it more vulnerable by improper conduct in the field.Visit to the Devbag and Tarkali reveals that no inventory of existing coral reefs with respect to the extent and quality exists.
8. The majority of the beaches like Tarkarli-Devbag, Tondavali, vulgar, Shiroda etc. used for beach tourism geomorphologically is a spit – a detached type of beach with Areabian Sea to its west and rivers bordering their eastern margins in the major section of the beach. In the majority of the situations all trafficking is along the narrow road that runs all along from north to south of the spit. There is an urgency for site specific traffic management policies or solutions, especially on Tarkarli- Devbag spit. (Pisolkar, 2014)
9. Carrying capacity studies are essential. The situation currently is more vulnerable regarding quality and quantity of water in certain section of the coast, especially in Devbag. (Pisolkar, 2013)
10. The villages of Devbag and Tarkarli have no waste management policy. Waste management awareness and policy for planning is found lacking.(Pisolkar,2013)
11. Lack of promotion of quality local products, traditional knowledge of local arts, culture and drama, built & geo-heritage in Integrated Coastal Zone Management (ICZM) and for tourism. (Pisolkar,2015)

Discussions

Present day relative positions on the Sindhudurg coast should be mapped with Geographic Information System (GIS) and Remote Sensing (RS). Mapping of the same on revenue maps is essential for all practical purposes.Temporal changes & Coastal Tourism and its impact on

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critical habitats, especially beach sand dune alterations, is not mapped. Detail study of Land Use and Land Cover (LULC) is essential for biodiversity conservation and sustenance of tourist activities. Also, it is essential, as coastal sand dunes absorb the impacts & safeguard coast at the time of surges in monsoon. It is essential to design policy, regulation and / or law and training programs to enhance the capacity and skills of all service providers. Strict guidelines and code of conduct is essential for tourists, especially for scuba divers.It is the need of the hour to create awareness regarding ecological importance and its conservation among all stakeholders in Sindhudurg district. Traditional fishing practices should be marketed and should be made tourist attraction. It is essential to identify site specific ecological, management and engineering solutions for coastal erosion.Local people always have a better understanding of the ecosystems, ecosystem services and site specific solutions. Modern GIS and Remote Sensing (RS) technologies & sound traditional knowledge of local people, should be used for Integrated Coastal Zone Management (ICZM) & Sustainable Tourism practices with more & more benefits to local people.

Conclusion

Sindhudurg district coastal zone today are facing challenges from various fronts such as population shifts, local conflicts, economic growth, developmental realities, erosion, flooding, increased tourism and lack of sustainable policy to name a few. For effective coastal zone management along Sindhudurg coast, we need to integrate diverse information encompassing various natural as well as man- made aspects. GIS based regional approach will have a positive effect on collaboration between scientists, local stakeholders, policy experts and coastal zone managers. GIS can aid better decision making through better analysis and visualization. It will help local governments maintain a variety of records at spatial scales, thus improving the quality and availability of information. GIS will provide intelligent information about phenomena such as beach erosion and coastal flooding. In addition, GIS can provide ready data for coastal zone management projects. Capacity building of GIS infrastructure can truly integrate collection and distributions of coastal information at Institutions or Governmental agencies which will create cooperation at all levels of stakeholders. GIS information can incorporate environmental, social and economic realities in the decision making process.

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A Study of Non-Performing Assets of Commercial Banks and it's recovery in India

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Abstract

The Indian banking sector has been facing serious problems of raising Non- Performing Assets (NPAs). The NPAs growth has a direct impact on profitability of banks. Non- performing assets are one of the major concerns for scheduled commercial banks in India. The recommendations of Narasimham committee and Verma committee, some steps have been taken to solve the problem of old NPAs in the balance sheets of the banks. It continues to be expressed from every corner that there has rarely been any systematic evaluation of the best way of tackling the problem. There seems to be no unanimity in the proper policies to be followed in resolving this problem. NPAs reflect the performance of banks. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and net-worth of banks and also erodes the value of the asset. NPAs affect the liquidity and profitability, in addition to posing threat on quality of asset and survival of banks. The problem of NPAs is not only affecting the banks but also the whole economy. In fact high level of NPAs in Indian banks is nothing but a reflection of the state of health of the industry and trade. It is necessary to trim down NPAs to improve the financial health in the banking system. An attempt is made in this paper to understand NPA, the status and trend of NPAs in Indian Scheduled commercial banks, The factors contributing to NPAs, reasons for high impact of NPAs on Scheduled commercial banks in India and recovery of NPAS through various channels.

Keywords: Non- Performing Assets, NPA, Scheduled Commercial banks, Narasimham committee

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A Study of Non-Performing Assets of Commercial Banks and it's recovery in India

Introduction

The banking system in India comprises commercial and cooperative banks, of which the former accounts for more than 90 per cent of banking system's assets. Besides a few foreign and Indian private banks, the commercial banks comprise nationalized banks (majority equity holding is with the Government), the State Bank of India (SBI) (majority equity holding being with the Reserve Bank of India) and the associate banks of SBI (majority holding being with State Bank of India). These banks, along with regional rural banks, constitute the public sector (state owned) banking system in India The banking industry has undergone a sea change after the first phase of economic liberalization in 1991 and hence credit management.

Asset quality was not prime concern in Indian banking sector till 1991, but was mainly focused on performance objectives such as opening wide networks/branches, development of rural areas, priority sector lending, higher employment generation, etc. While the primary function of banks is to lend funds as loans to various sectors such as agriculture, industry, personal loans, housing loans etc., but in recent times the banks have become very cautious in extending loans. The reason being mounting nonperforming assets (NPAs) and nowadays these are one of the major concerns for banks in India.

Bankers are the custodians and distributors of the liquid capital of the country. Therefore most important function of the banking system is to mobilize the savings of the people by accepting deposits from the public. The banker becomes the trustee of the surplus balances of the public.

Deposit mobilization promotes the economic prosperity by controlling the money circulation and canalizing for development and productive purposes. In order to mobilize deposits, the commercial banks undertake deposit mobilization through various deposit schemes suited to the different sections of the people. The deposits along with other sources of funds namely capital, reserves and borrowings, form the sources of funds for the banks. The lending and investment activities of the bank are based on the sources of funds.

The banks, in their books, have different kind of assets, such as cash in hand, balances with other banks, investment, loans and advances, fixed assets and other assets. The Non-Performing Asset (NPA) concept is restricted to loans, advances and investments. As long as an asset generates the income expected from it and does not disclose any unusual risk other

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than normal commercial risk, it is treated as performing asset, and when it fails to generate the expected income it becomes a "Non-Performing Asset".

In other words, a loan asset becomes a Non Performing Asset (NPA) when it ceases to generate income, i.e. interest, fees, commission or any other dues for the bank for more than 90 days. A NPA is an advance where payment of interest or repayment of installment on principal or both remains unpaid for a period of two quarters or more and if they have become 'past due'. An amount under any of the credit facilities is to be treated as past due when it remain unpaid for 30 days beyond due date.

Non-Performing Assets are also called as Non-Performing Loans. It is made by a bank or finance company on which repayments or interest payments are not being made on time. A loan is an asset for a bank as the interest payments and the repayment of the principal create a stream of cash flows. It is from the interest payments that a bank makes its profits. Banks usually treat assets as non-performing if they are not serviced for some time. If payments are late for a short time, a loan is classified as past due and once a payment becomes really late (usually 90 days), the loan is classified as non-performing. A high level of nonperforming assets, compared to similar lenders, may be a sign of problems.

Narasimham Committee that mandated identification and reduction of NPAs to be treated as a national priority because NPA direct toward credit risk that bank faces and its efficiency in allocating resources. Profitability and earnings of banks are affected due to NPA numbers. If we glance on the numbers of non-performing assets we may come to know that in the year 1995 the NPAs were Rs. 38385 crore and reached to 71047 crore in 2011 in Public sector banks and comparatively in the year 2001 the NPAs were Rs. 6410 crore and reached to Rs. 17972 crore in 2011 in Private sector banks.

Review of Literature

Many published articles are available in the area of non-performing assets and a large number of researchers have studied the issue of NPA in banking industry. A review of the relevant literature has been described. Kumar (2013) in his study on A Comparative study of NPA of Old Private Sector Banks and Foreign Banks has said that Non-performing Assets (NPAs) have become a nuisance and headache for the Indian banking sector for the past several years. One of the major issues challenging the performance of commercial banks in the late 90s adversely affecting was the accumulation of huge non-performing assets (NPAs). Selvarajan & Vadivalagan (2013) in A Study on Management of Non-Performing Assets in Priority

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Sector reference to Indian Bank and Public Sector Banks (PSBs) find that the growth of Indian Bank's lending to Priority sector is more than that of the Public Sector Banks as a whole. Indian Bank has slippages in controlling of NPAs in the early years of the decade. Singh (2013) in his paper entitled Recovery of NPAs in Indian commercial banks says that the origin of the problem of burgeoning NPA's lies in the system of credit risk management by the banks. Banks are required to have adequate preventive measures in fixing pre- sanctioning appraisal responsibility and an effective post-disbursement supervision. Banks should continuously monitor loans to identify accounts that have potential to become non- performing. Gupta (2012) in her study A Comparative Study of Non-Performing Assets of SBI & Associates & Other Public Sector Banks had concluded that each bank should have its own independence credit rating agency which should evaluate the financial capacity of the borrower before credit facility and credit rating agencies should regularly evaluate the financial condition of the clients. Rai (2012) in her study on Study on performance of NPAs of Indian commercial banks find out that corporate borrowers even after defaulting continuously never had the fear of bank taking action to recover their dues. This is because there was no legal framework to safeguard the real interest of banks. Chatterjee C., Mukherjee J. and Das (2012) in their study on Management of non-performing assets - a current scenario has concluded that banks should find out the original reasons/purposes of the loan required by the borrower. Proper identification of the guarantor should be checked by the bank including scrutiny of his/her wealth. Kaur K. and Singh B. (2011) in their study on Non-performing assets of public and private sector banks (a comparative study) studied that NPAs are considered as an important parameter to judge the performance and financial health of banks. The level of NPAs is one of the drivers of financial stability and growth of the banking sector. Prasad G.V.B. and Veena (2011) in their study on NPAs Reduction Strategies for Commercial Banks in India stated that the NPAs do not generate interest income for banks but at the same time banks are required to provide provisions for NPAs from their current profits, thus NPAs have destructive impact on the return on assets in the following ways. Chaudhary K. and Sharma M. (2011) in their research stated that An efficient management information system should be developed. The bank staff involved in sanctioning the advances should be trained about the proper documentation and charge of securities and motivated to take measures in preventing advances turning into NPA. Karunakar (2008), in his study Are non - Performing Assets Gloomy or Greedy from Indian Perspective, has highlighted problem of losses and lower profitability of Non- Performing Assets (NPA) and liability mismatch in Banks and financial sector depend on

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how various risks are managed in their business. The lasting solution to the problem of NPAs can be achieved only with proper credit assessment and risk management mechanism. Bhatia (2007) in his research paper explores that NPAs are considered as an important parameter to judge the performance and financial health of banks. The level of NPAs is one of the drivers of financial stability and growth of the banking sector. Kaur (2006) in her thesis titled Credit management and problem of NPAs in Public Sector Banks, suggested that for effective handling of NPAs, there is an urgent need for creating proper awareness about the adverse impact of NPAs on profitability amongst bank staff, particularly the field functionaries. Bankers should have frequent interactions and meeting with the borrowers for creating better understanding and mutual trust. Balasubramaniam C.S. (2001) highlighted the level of NPAs is high with all banks currently and the banks would be expected to bring down their NPA. This can be achieved by good credit appraisal procedures, effective internal control systems along with their efforts to improve asset quality in their balance sheets.

Research and Time gap in Literature

The different aspects of literature related to Non-Performing Assets of researchers over the years have been collected and used for this study, but there is a huge time gap existing for the comprehensive research on quality aspects of Non-Performing Assets. Most of the research and studies are being done on causes, impact and management aspects of NPAs.

Objectives of the Study

- To study the status of Non Performing Assets of Indian Scheduled Commercial Banks in India
- To study the impact of NPAs on Banks.
- To know the recovery of NPAS through various channels.
- To make appropriate suggestions to avoid future NPAs and to manage existing NPAs in Banks.

Limitation of the Study

The important limitations are as follows;

- The study of non-performing assets of SCBs is limited to the Indian Bank and till the end of the year 2014.
- The basis for identifying non-performing assets is taken from the Reserve Bank of India Publications.
- NPAs are changing with the time. The study is done in the present environment without

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foreseeing future developments.

Scope of the Study

The study has the following scope:

- The study could suggest measures for the banks to avoid future NPAs & to reduce existing NPAs.
- The study may help the government in creating & implementing new strategies to control NPAs.
- The study will help to select appropriate techniques suited to manage the NPAs and develop a time bound action plan to check the growth of NPAs.

Sources of Data

The data collected is mainly secondary in nature. The sources of data for this thesis include the literature published by Indian Bank and the Reserve Bank of India, various magazines, Journals, Books dealing with the current banking scenario and research papers.

Methodology of Study

For our study, we have considered Non Performing Assets in Scheduled Commercial Banks which includes public sector banks, private sector banks and foreign banks which are listed in the Second Schedule of the Reserve Bank of India Act, 1934. The study is based on secondary data. The paper discusses the conceptual framework of NPA and it also highlights the trends, status and impact of NPA on scheduled commercial banks during the period of 14 years i.e. from 2000 to 2014. Several reputed research journal including research paper and articles have been used by the researchers. Moreover, RBI Report on Trend and Progress of Banking in India for various years, websites and a book on banking has been referred during the study.

Population

Banking industry is taken for the study, where aggregate data related to NPA for Public sector Banks, Private Sector Banks and Foreign Banks is used.

Time- Period of the Paper

14 year's Aggregate data from 2000 to 2014 is used for the study.

Non-Performing Assets in Indian Scheduled Commercial Banks

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Table 1 – Gross Advances and Gross NPAS of SCBs (Amount in Rupees Billion)

Year	Gross Advances	Gross NPAs (Amount)	Gross NPAs (Percentage)
2001-02	6809.58	708.61	10.4
2002-03	7780.43	687.17	8.8
2003-04	9020.26	648.12	7.2
2004-05	11526.82	593.73	5.2
2005-06	15513.78	510.97	3.3
2006-07	20125.10	504.86	2.5
2007-08	25078.85	563.09	2.3
2008-09	30382.54	683.28	2.3
2009-10	35449.65	846.98	2.4
2010-11	40120.79	979.00	2.5
2011-12	46655.44	1370.96	2.9
2012-13	59882.79	1931.94	3.2
2013-14	68757.48	2641.95	3.8

Source: dbie.rbi.org.in

The above table depicts the amount of Gross Advances, Gross NPA and the percentage of Gross NPA during the period of 2001-02 to 2013-14. The amount of advances of has increased from Rs. 6810 Billion in 2001-02 to Rs. 68757 Billion in 2013-14. The amount of gross NPA has increased from Rs. 708.61 billion in 2001-02 to Rs. 2642 billion in 2013-14. Similarly, NPA percentage is also showing the rising trend from 2.3 in 2007 to 3.8 in 2013.

Table 2 – Net Advances and Net NPAS of SCBs (Amount in Rupees Billion)

Year	Net Advances	Net NPAs (Amount)	Net NPAs (Percentage)
2001-02	6458.59	355.54	5.5
2002-03	7404.73	296.92	4.0
2003-04	8626.43	243.96	2.8
2004-05	11156.63	217.54	2.0
2005-06	15168.11	185.43	1.2

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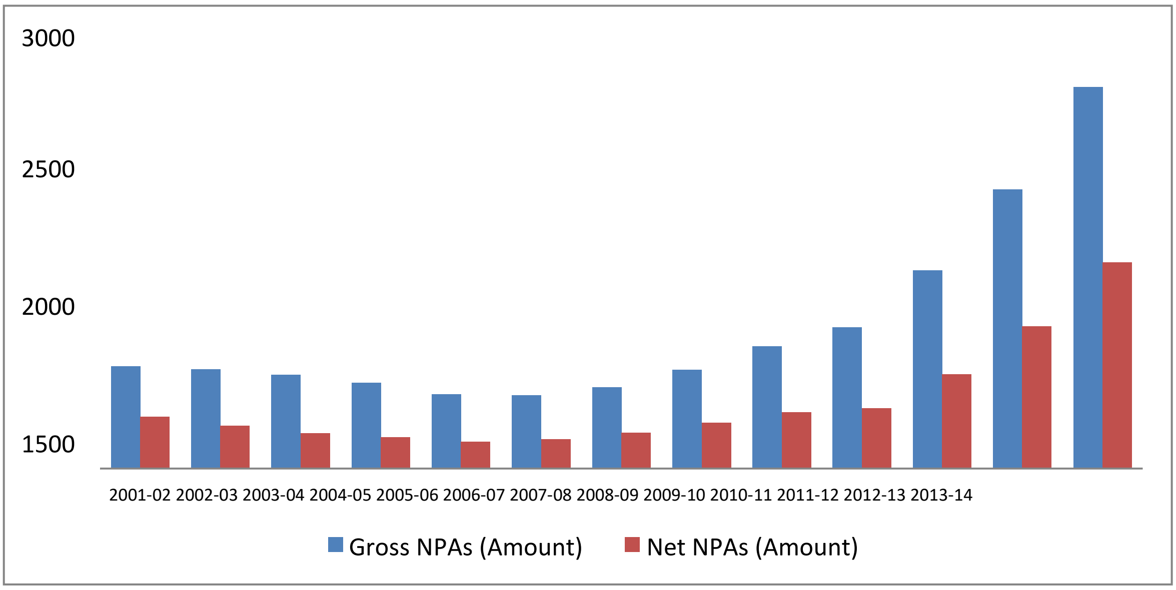
2006-07	19812.37	201.01	1.0
2007-08	24769.36	247.30	1.0
2008-09	29999.24	315.64	1.1
2009-10	34970.92	387.23	1.1
2010-11	42987.04	417.00	1.1
2011-12	50735.59	652.00	1.3
2012-13	58797.03	986.00	1.7
2013-14	67352.32	1426.57	2.1

Source: dbie.rbi.org.in

The above table shows the amount of Net Advances, Net NPA and the percentage of Net NPA during the period of 2001-02 to 2013-14. The amount of advances has increased from Rs. 6458.59 billion in 2001-02 to 67352.32 billion in 2013-14. Further, the amount of NPA has also increased from Rs. 355.54 billion to Rs1426.57 billion during the period (2001-02 to 2013-14).

The percentage of Net NPA has first declined from 5.5 in 2001-02 to 1.0 in 2007-08. Then it has increased to 2.10% in 2013-14.

Figure 1 – Scheduled Commercial Banks (Gross and Net NPAs)



The above figure shows the trend of Gross NPA and Net NPA in billion for the period of 13

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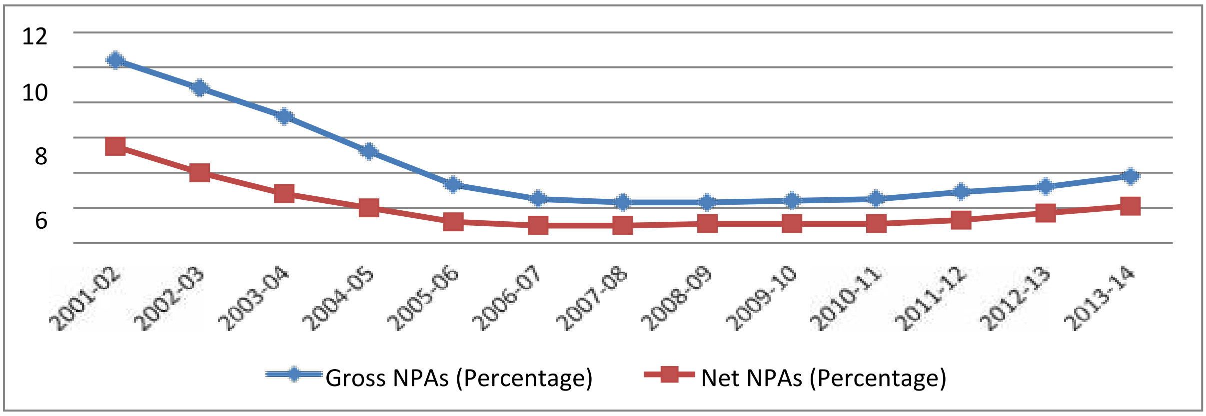
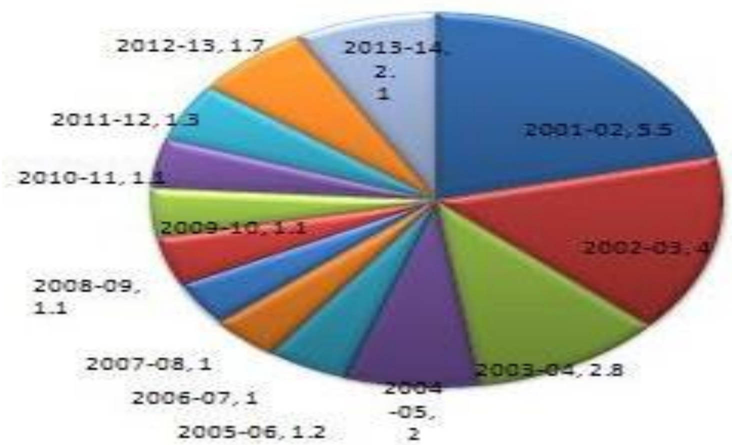
years starting from 2001-02 till 2013-14. The x-axis represent the years i.e. as the period of (2001-02 – 2013-14) whereas y-axis represent the amount of NPA. We can observe here that the Gross and Net amount of NPA has been showing an upward trend beginning from 2006-07 to 2013-14.

Figure 2 – Gross and Net NPA (in Percentage)



The above figure portrays the trend of Gross NPA and Net NPA in percentages for the period of 13 years i.e. from 2001-02 till 2012-14. The x-axis represents the years whereas y-axis represents the percentage of NPA. We can observe here that the Gross and Net percentage of NPA has been showing downward trend from 2001 to 2007-08 and an upward trend beginning from 2007-08 to 2013-14.

Figure 3 – Net NPAs as a Percentage of Net Advances (SCBs)



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The above figure shows NPAs as a Percentage of Net Advances which was lowest 1.0 % in 2007-08 & 2008-09 and highest 5.5 % in 2001-02. It was 2.2 % in 2013-14.

Table 3 – Showing NPAs recovered by SCBs through Lok Adalats (Amount in Crore)

Item	2008	2009	2010	2011	2012	2013	2014
Number of Cases Referred	1,86,535	5,48,308	7,78,833	6,16,018	4,76,073	8,40,691	16,36,957
Amount Involved	2142	4023	7235	5254	1700	6600	23200
Amount Recovered	176	96	112	151	200	400	1400
% of Amount recovered	8.2	2.4	1.55	2.87	11.8	6.1	6.2

Sources: R.B.I

Table 3 is showing NPAs of commercial banks recovered through Lok Adalats during the study period of 2008 to 2014. From the analysis of the table, it is clear that the number of cases referred to Lok Adalats for the recovery of NPAs of commercial banks has increased largely in 2014 as compared to 2008. However, if we look at the amount recovered by Lok Adalats during the study period, it shows a continuous decline from 2008 to 2009 and then it shows improvement from 2010 to 2014, but it is much less than the other recovery channels. These Lok Adalats are only successful in recovering 1400 crore out of 23200 crore means only 6.2% of the total amount involved in NPAs of the commercial banks. Due to its inefficiency in recovering, the amount involved in NPAs, the commercial banks resorting to others means of recovery.

Table 4. Showing NPAs recovered by SCBs through DRTs (Amount in Crore)

Item	2008	2009	2010	2011	2012	2013	2014
Number of Cases Referred	3728	2004	6019	12872	13,365	13408	28258
Amount Involved	5819	4130	9797	14092	24,100	31000	55300
Amount Recovered	3020	3348	3133	3930	4100	4400	5300
% of Amount recovered to Total Amount	51.9	81.1	32.00	27.89	17.00	14.1	9.5

Sources: R.B.I.

Table 4 is showing NPAs of commercial banks recovered through DRTs during the study period of 2008 to 2014. From the analysis of the table, it is clear that the number of cases for the recovery of NPAs referred to DRTs is increasing through the study period and also the amount involved in these cases and the amount recovered through DRTs has increased. DRTs shows their efficiency in 2008-09 where it recovers 81.1pc of the total amount involved in NPAs and in later years also the amount recovered by DRTs is quite significant. This is the basic reason why the commercial banks are approaching DRTs for the recovery of their NPAs as compared to Lok Adalats in which the percentage of recovered amount of NPAs is very low. Though we can say that there is a slight decrease in the percentage of amount recovered by DRTs of the NPAs of commercial banks, though these are a significant recovery channel for the commercial banks.

Table 5. Showing NPAs recovered by SCBs through SARFAESI Act (Amount in Crore)

Item	2008	2009	2010	2011	2012	2013	2014
Number of Cases Referred	83,942	61,760	78,366	1,18,642	1,40,991	1,90,537	1,94,707
Amount Involved	7263	12067	14249	30604	35300	68100	94600
Amount Recovered	4429	3982	4269	11561	10100	18500	24400
% of Amount recovered to Total Amount	61.0	33.0	30.00	37.78	28.6	27.1	25.8

Sources: R.B.I

Table 5 is showing NPAs of commercial banks recovered through SARFAESI Act during the study period of 2008 to 2014. From the analysis of the table, it is clear that the number of cases referred to SARFAESI Act and the amount of NPAs involved is increased largely during the study period. This is done because of the efficiency of SARFAESI Act in recovering these NPAs of commercial banks. From the table it is clear that the SARFAESI Act is able to recover 25.8% of the amount of NPAs of the cases referred to it in the year 2014. In 2008 recovery percentage was quite higher 61.0% this act has emerged as a blessing in disguise for the commercial banks as now they are using this act largely in recovering their NPAs in order to increase their profitability.

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Figure 4 – Recovery of NPAs of SCBs through various Channels (Amount in Rs. Crore)

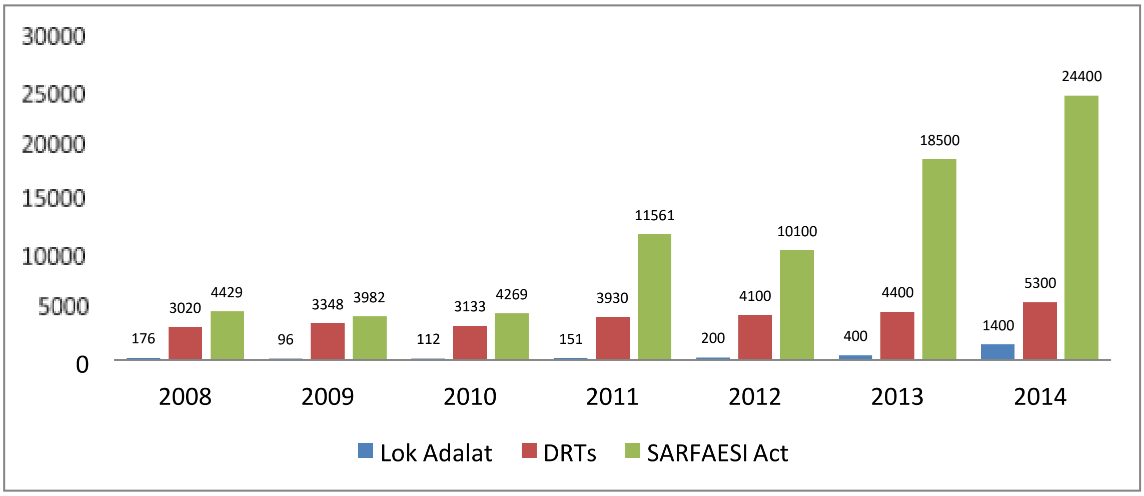

Figure 4 clearly showing NPAs of scheduled commercial banks recovered through various channels SARFAESI Act during the study period of 2008 to 2014. SARFAESI Act is the most effective channel of NPA recovery. Rs. 24,400 Crores were recovered through this channel in 2014.

Impact of NPA

NPA impact the performance and profitability of banks. The most notable impact of NPA is change in banker's sentiments which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy. If the level of NPAs is not controlled timely they will:

- Reduce the earning capacity of assets and badly affect the ROI.
- The cost of capital will go up.
- The assets and liability mismatch will widen.
- Higher provisioning requirement on mounting NPAs adversely affect capital adequacy ratio and banks profitability.
- The economic value additions (EVA) by banks get upset because EVA is equal to the net operating profit minus cost of capital.
- NPAs causes to decrease the value of share sometimes even below their book value in the capital market.

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- NPAs affect the risk facing ability of banks.
- Reduce the earning capacity of assets and badly affect the ROI.
- The cost of capital will go up.
- The assets and liability mismatch will widen.
- Higher provisioning requirement on mounting NPAs adversely affect capital adequacy ratio and banks profitability.
- The economic value additions (EVA) by banks get upset because EVA is equal to the net operating profit minus cost of capital.
- NPAs causes to decrease the value of share sometimes even below their book value in the capital market.
- NPAs affect the risk facing ability of banks.

Findings

- Gross NPAs of scheduled commercial banks have increased from Rs. 708 Billion in 2000-01 to Rs 2642 Billion in 2012-13.
- Net NPAs of scheduled commercial banks have increased from Rs. 355 Billion in 2000-01 to Rs. 986 Billion in 2012-13.
- NPAs as a Percentage of Net Advances which was lowest 1.0 % in 2007-08 & 2008-09 and highest 5.5 % in 2001-02. It was 2.2 % in 2013-14.
- The average Percentage of Net NPAs during 2001-02 to 2013-14 was around 2.0%
- Number of Cases Referred to Lok Adalat was 1,86,535 in 2008 and reached to 16,36,957 in 2014
- Rs. 2535 crores of NPAs of SCBs recovered through Lok Adalat during 2008 to 2014
- Rs. 27231 crores of NPAs of SCBs recovered through DRTs during 2008 to 2014
- Rs. 77241 crores of NPAs of SCBs recovered through SARFAESI Act during 2008 to 2014
- Ineffective recovery, wilful defaults and Defective lending process are the important factors which are responsible for the rise of NPAs in banks.
- NPAs reduce the earning capacity banks and badly affect the ROI.

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Recommendations for management of NPAs

- RBI should revise existing credit appraisals and monitoring systems.
- Banks should improved upon and strengthen the loan recovery methods
- Credit appraisal and post –loan monitoring are crucial steps which need to concentrate by all the public sector banks.
- There must be regular follow-up with the customers and it is the duty of banker to ensure that there is no diversion of funds. This process can be taken up at regular intervals.
- Personal visits should be made after sanction and disbursal of credit and further close monitoring of the operations of the accounts of borrowed units should be done periodically.
- Managers under credit monitoring and recovery department should have dynamism in their work. Many managers say that "we do not fear to negotiate but we do not negotiate out of fear. Such fear leads to arbitrary negotiation, which fails.
- Frequent discussions with the staff in the branch and taking their suggestions for recovery of dues.
- Assisting the borrowers in developing his/her entrepreneurial skill will not only establish a good relation between the borrowers but also help the bankers to keep a track of their funds.
- RBI may initiate actions against defaulters like, publishing names of defaulters in News papers, broadcasting media, which is helpful to other banks and financial institutions.
- As a part of curative measures, bankers may resort to Compromise Settlement or One Time Settlement. Lok Adalats and Debt Recovery Tribunals are other ways for the recovery of dues. It has been observed that Banks these days are highly resorting to SARFAESI Act for the management of NPA.
- If the delinquencies are due to reasons beyond the control of borrower which are namely draughts, floods, or other natural calamities, the banker should suitably restructure the loans taking into account the genuine difficulty of the borrowers.

Conclusion

The Non-Performing Assets have always created a big problem for the banks in India. It is just not only problem for the banks but for the economy too. The money locked up in NPAs has a direct impact on profitability of the bank as Indian banks are highly dependent on income from interest on funds lent. This study shows that extent of NPA is comparatively very high in public sectors banks. Although various steps have been taken by government to reduce the

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NPAs but still a lot needs to be done to curb this problem. The NPAs level of our banks is still high as compared to the foreign banks. It is not at all possible to have zero NPAs. The bank management should speed up the recovery process. The problem of recovery is not with small borrowers but with large borrowers and a strict policy should be followed for solving this problem. The government should also make more provisions for faster settlement of pending cases and also it should reduce the mandatory lending to priority sector as this is the major problem creating area. So the problem of NPA needs lots of serious efforts otherwise NPAs will keep killing the profitability of banks which is not good for the growing Indian economy at all.

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A Review of the Effects of Foreign Direct Investment on Economic Growth

J. C. Sharmiladevi[1]

Abstract

The literatures of international business is increasingly dominated by the beneficial effects of Foreign Direct Investment (FDI) on host economies across the globe. The encouragement FDI is receiving from international operations of multinational enterprises on the one side and governments on the other side diversified capital flow internationally. FDI is viewed as a panacea for economic development of developing and emerging economies, including India. With time, the benefits which India received from FDI operations have been accessed both theoretically and empirically with different data sets, methodologies and variables. This review paper makes an attempt to examine the nexus between FDI and economic growth in recent literatures.

Keywords: Foreign Direct Investment, Economic Growth

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A Review of the Effects of Foreign Direct Investment on Economic Growth

Introduction

In the past two decades nations around the globe have witnessed huge flow of private capital flow in the form of Foreign Direct Investment (FDI). FDI is functioning as an instrument in enhancing the phase of economic growth of developing economies.it is an important source of development finance which contributes to multiple gains by providing new investments, better technology, management expertise, export markets, creates forward and backward linkage, a phenomenon has been widely accepted in the literatures of international business. With the prevailing resource constraints accompanied with lack of investment, market forces, private sectors and governments also rely upon FDI as an engine for sustaining economic growth.

Economic theory suggests that FDI can have a positive effect on the economy, as the output in an economy influences FDI flows. For India, FDI remain small when measured as a proportion of gross domestic product (GDP) or total investment and plays a very small role in the development of our economy. This contrasts with the very important role that FDI has played in the economic development of other fast growing Asian economies such as ASEAN, China, Singapore, Thailand, Indonesia and Malaysia (Palit & Nawani, 2007). FDI led growth hypothesis has not adequately tested in the current Indian context and those scanty literatures which actually tested is not yielding consistent results. The reasons are many. Hence this paper examines the literatures which examine the link between FDI and growth. Addressing the gaps in the existing literatures, will help the research fraternity, key areas upon which further research must keep focus.

Literature Surveys

A detailed survey of literatures examining the role played by FDI on economic growth is undertaken here. The literatures are also reviewed chronologically. The increasing role played by FDI in enhancing Economic Growth of the emerging and developing economies have kindled the interest of many researchers which brought forth many research studies examining the positive link between FDI and Economic Growth. [(Quazi 2007), (Vadlamannati et al 2009); (Wang, 2009) (Pradhan R. , 2006)].

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De Mellow's (1992) research in OECD countries concludes that FDI had significantly positive effect on economic growth for countries with high income. De Gregorio (1992) indicates that at the macro level using aggregate FDI flows for a broad cross-section of countries – suggest a positive role for FDI in generating economic growth especially in particular environments. Blomstrom et al (1994) argue that FDI has a positive growth-effect when the country is sufficiently rich. Balasubramanyam et al (1996) stress that trade openness is crucial for obtaining the growth-effects of FDI Borensztein et al (1998) identified that FDI has a positive significant effect on economic growth and contributes to economic growth to countries when the labour force has attained certain level of educational standard. Dua & Rashid, (1998) found a long run relationship between GDP and FDI. Alfaro et al (2004) found that FDI promotes economic growth in economies with sufficiently developed financial markets. Pradhan (2002) estimates a Cobb-Douglas production function using aggregate data for 1969-97 finds that FDI has no significant impact on growth. Tanna & Lensink (2003) argue that FDI has a positive growth-effect when the country has a highly educated workforce that allows it to exploit FDI spillovers. Study conducted by Sahoo & Mathiyazhagan, (2003), and Kumar & Pradhan (2002) consider FDl-growth relationship to be neutral for India.

Lall & Rajneesh (2004) are of the view that removal of restrictions on FDI does not create the complementary factors which MNEs need, it only allows them to exploit existing capabilities more freely available. Agrawal (2005) obtains panel estimates for five South Asian countries, including India, for the period 1965-96 and found that the growth impact of FDI is negligible. Young (2007) examines the effect of economic integration on FDI flows in ASEAN 5 countries. His results indicates that FDI flow into ASEAN countries was found to be inversely proportional to the per capital income of the five countries.

Chandana & Peter (2006) indicate that FDI has got only a transitory effect on growth in India. Balasubramanyam et al (2006) indicate that, for India, at present, it is not FDI which promotes growth, but it is growth which attracts foreign firms, since FDI is one of the several factors which contributes growth. Singhania & Akshay (2011) used an ARIMA model-Auto Restricted Integrated Moving Average to explain the variations in FDI inflows into India, and their results indicates GDP along with other factors like inflation and scientific research are significant determinant factors for FDI inflow into India.

To increase economic growth of India more direct foreign investment is required. And in the same line higher inflow of direct foreign investment is enhancing economic growth and for

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enhancing higher economic growth more foreign investment is required (Sharmiladevi & Saifilali, 2013). Vital parameters which influences the internal business environment of a nation like growth rate, inflation, IIP, exports is having a direct influence upon India's credibility in the international arena in terms of attracting more FDI. (Sharmiladevi & Saifilali, 2013). Anastasia & Panagiotis (2014) conducted a panel data analysis for 20 years for countries in European Union and found that FDI exerts only a slight positive effect on GDP in European Union countries.

Conclusion

The literatures examined above gives us an indication that, there are increasing number of studies which support that FDI causes economic growth. Differences in the results can be attributed to factors like, use of different time series data, treatments given to data for overcoming inbuilt structural breaks and stationarity issues, methodological aspects, models adopted for analysis like Causality analysis, ARIMA models, and vector error correction/vector auto regression models.

Most of the above studies are of recent ones, where the time period considered was after 1990, that is, after globalization. But the process of liberalization, globalization and privatization (LPG) has thrown open only the necessary conditions for the entry of FDI, but in itself LPG has not created the sufficient conditions for enhancing the prospects of FDI. Materializing the benefits of FDI is a long term process, and it depends upon many factors like, the existence and establishment of linkages between foreign and local affiliates, inter firm linkages, absorptive capacity of human resources, motivations behind initiating FDI by individual MNCs, overcoming socio-cultural environmental differences, government initiatives.

Few research studies gives us the direction upon which we need to concentrate for enhancing FDI benefits upon growth. Research undertaken by Bajpai & Sachs (2006) concludes that a restricted FDI regime, high import tariffs, exit barriers for firms, stringent labour laws, poor quality infrastructure, centralized decision making processes and a very limited scale of export processing zones make India as an unattractive investment location. A recent study by Gould et al (2014) concludes that liberalizing policy constraints, modest corporate tax and improving governance and transparency could help to substantially improve FDI flows to Asian countries.

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Accounting Practices leading to Sustainable Development

Anupa Godse[1] and Soma Kulshretha[2]

Abstract

As the world increasingly grapples with the effects of global warming, the thrust of economic activity is towards development that is sustainable. Organizations exist in society; therefore they must abide by not only the rules framed for the conduct of any business but also current public concerns. It is accepted now that the organizations are accountable to their shareholders, to the society as well as to the environment. All professions including accounting need ethical behavior. As companies become better governed, they will start using the available resources judiciously. This responsible behavior would lead to sustainable development as a whole. Managers have fiduciary responsibility and it must be reflected in their behavior. The interlinkage of accounting ethics and responsible behavior on the part of managers will ensure that the organizations are successful without compromising the wellbeing of all the stakeholders. The practice of sustainability reporting may be useful in identifying and quantifying the impact of organizational activity on the stakeholders.

Key Words

Sustainable development, Accounting, Ethics, Stakeholders

JEL Classification: M40 Q01

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Accounting Practices leading to Sustainable Development

Introduction

As societies evolved, the laws came into existence. Laws ensured correct behavior on the part of all members of the society. Laws also conferred protection on the most vulnerable entities in the society. Rapid industrialization led to complexities in business. The judiciary was slow to respond to these complexities and therefore the world saw many upheavals and scandals in the business world. Profit maximization was considered the only real objective of organizations. The impact on environment or on society was not considered while making decisions. However, today's world is becoming more conscious and many societies and countries have put in place extensive legal frameworks to ensure ethical conduct from managers.

Managers are custodians of society's resources and accountable to all the stake holders. Stake holders are not just the shareholders who have invested in the company. Stakeholders are also all those entities which are profoundly impacted by the actions of the company. These stakeholders can be customers, the civil society at large, the environment and also the future generations – as the decisions taken today will affect them profoundly as well. The next big challenge that the world is facing is continuing the tremendous advancement with finite resources, which are depleting day by day.

Most managers would consider themselves to be ethical individuals. This leads them to undertake conduct that goes beyond mere legal obligation. The behavior of the managers is mainly decided by the rules and regulations since the corporations must abide by them. Most countries have intricate and elaborate legal frameworks to govern this behavior. The managerial behavior is also guided by ethics. So the behavior should be ethical in the sense that they follow not only legal and non-legal aspects due to obligations but also adopt ''ethics'' for formation of a good organization which is a part of society as a whole.

With this goal in mind, the business world is moving towards more ethical practices. These practices first and foremost include changes in the production and technological inventions to make the business activity less polluting and less wasteful. Another front on which the business world has responded is in terms of accounting practices. Ethical and conscious accounting practices go beyond merely meeting the legal requirements. They ensure that the interests of all stakeholders, including all silent or invisible stake holders, such as the

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nature and future generations -are protected. All resources are accounted for and efficiently used, thereby lessening the burden on the environment and achieving advancement that is sustainable.

Objectives of the Study

- To demonstrate the changing role of accounting in today's business world
- To explain how the business world has responded to the challenges of sustainable development through accounting practices as well
- To highlight the concept of Triple Bottom Line accounting
- To shed light on some of the accounting approaches adopted by the business community towards sustainability reporting

Research Design

The research was based primarily on secondary form of data derived from books and scholarly research papers. The paper gets its start from the literature review and then attempts to draw conclusion through analysis and critical thinking.

Literature Review

It has been many decades since the concept of Business Ethics has taken root and been recognized as an essential subject area in its own right. (Baumhart R, 1962). The Dictionary defines Accounting ("Accounting" 2015) as the system of recording and summarizing business and financial transactions and analyzing, verifying and reporting the results. The raison d'etre of accounting is to keep a track of a company's funds as well as portraying a picture of its financial wellbeing, based upon which the potential investors could make informed decisions. For this purpose, two groups of professionals have generally emerged. Namely: the in-house or internal accountants and the external auditors.

Accounting ethics is a field that applies the mores and rules of ethical conduct to accountancy. Luca Pacioli is largely credited for introducing ethics in accounting. (Lee T, Bishop A, Parker R Eds.2014)**.** As the economies around the world advanced, so did the financial mal practices and irresponsible use of the organization's resources for personal gain. It was forgotten that the managers are merely trustees and not the owners of the money entrusted to them by the shareholders. Governments responded by putting in place extensive rules and regulations.

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Today the all over the world ethics and accounting ethics are taught in the hope that the future managers will be more ethical and responsible in their behavior.

The managers sometimes feel pressured to resort to fraudulent activities to achieve business goals. (M Baucus 1994) The role of accountants and auditors has been recognized in ensuring correct practices and bringing transparency. Not just external auditors, but internal auditors and accountants too can help in detecting and preventing frauds. (James K 2003) All these best practices will lead to responsible use of available resources – money as well as other resources. If all organizations are as efficient with their resources, the society at large will automatically be more efficient with the available resources.

The word 'sustainable' means something that can go on existing infinitely. (Webster's 2015) The world has progressed a great deal. However, this progress has come at a great environmental cost. This kind of development is not sustainable. The world needs to change its course of action if it needs to keep progressing. Sustainable development is essential not just for advancement but indeed for the very existence of our planet.

Today it is recognized that there several visible and invisible stakeholders to any economic venture. The visible stakeholders are shareholders, the government and the society at large. The silent stake holder is the environment and the invisible stakeholder is the future generation. (Freeman R. Edward 1994) Taking into consideration the welfare of all these stakeholders, it is absolutely imperative that organizations remain ethical in their conduct and contribute to sustainable development.

Once, they became aware, corporations took on the challenge of lessening the negative impact and bringing about positive change. This also made good business sense. (Joyner B, Payne D 2002) The production systems were revamped to be more efficient, thereby ensuring that the resources are being used judiciously. A lot of investments were made in finding alternative fuels and materials. Efforts were made to make the buildings, factories less polluting and more environmentally friendly. The corporations also built strong Corporate Social Responsibility programs that give back to the society. All of these efforts matter. Gauging the impact of these efforts is also extremely important (Epstein M & Buhovac A 2014). Instead of treating profit maximization as the 'be all and end all' of organizations, today's e managers have started paying close attention to the impact of organizational activity. The managers and accountants are greatly aided by the emerging field of sustainability reporting (Kolk A 2004).

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Sustainability reporting strives to express the impact on stakeholders in quantifiable or monetary terms; making it easier for analysis and decision making. The concept of sustainability reporting might have taken root in 1990s (R Hahn, M Kühnen 2013) but it is only now that the concept has received wider acceptance.

Triple Bottom Line (TBL)

The accounting world has responded to the challenge by coming up with several concepts and approaches that faithfully report the impact of sustainability practices of corporations. One such widely accepted approach is the Triple Bottom Line Approach. John Elkington, who is considered an authority on sustainable practices, is credited with originating this approach. This approach, which is essentially an accounting approach, goes well beyond the usual norms of return on investment, profitability, etc. Instead, the Triple Bottom Line Approach concentrates on three aspects – People, Profit and the Planet. (Elkington J. 1999) These three are irrevocably interconnected. The TBL approach demonstrates that the 'bottom line' is not only with respect to the profits earned, but also relating to the kind of impact that the organization will have on individuals and the ecology.

The Triple Bottom Line approach is unique in that it started accounting for the impact of the business activity on not only the concerned company, but other stakeholders such as individuals and indeed the entire planet. It is these stakeholders that are indirectly, but equally affected. But the traditional accounting and reporting systems would not represent their interests and concerns.

The adoption of the Triple Bottom Line demonstrates the tacit agreement and acknowledgement on part of the business world about this impact. The first step in resolving any problem is the acknowledgement. Triple bottom line approach will demonstrate to managers the impact of actions not only on visible stakeholders but also on invisible or silent stakeholders as well. As the impact becomes apparent, the managers will feel compelled to decrease negative impact and increase the positive impact, thereby achieving the organizations goal in a sustainable way.

Corporate Sustainability Reporting

The challenge still remains as to how to report or quantify the impact of sustainable practices. There is no uniform, measurable unit that can accurately pinpoint the impact of sustainable

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practices as a quantifiable value. Again, the accounting world has responded with several approaches to tackle this challenge. One such approach is suggested by Global Reporting initiative (GRI). This is a professional, not for profit body. Comprising of accounting professionals, they have designed a framework to help companies report on their sustainability practices. The framework has been adopted by more than 11,000 corporations around the world. The GRI framework is fundamentally based upon GAAP (generally accepted accounting principles). This framework strives to report the triple bottom line with clarity and accuracy. The GRI has constructed 146 different indicators on which to measure the performance (Sustainability Reporting Guidelines on Economic, Environmental and Social Performance, Global Reporting Initiative, 2000) such as Economic (profits, ROI, sales), Environmental (Energy needed, Waste Material generated and disposed), Social (benefits to employees, product safety). GRI approach helps companies measure the sustainability impact and brings in transparency. It will also help managers to make informed decisions. Again this is an attempt on part of the business world to not only acknowledge but also to actively address and report the sustainability practices in terms of quantifiable terms.

As the concept of Corporate Sustainability Reporting gains wide acceptance, more and more companies will start accounting for actions and their impact, this will further encourage companies to adopt practices which friendly towards the environment and conscious about the social good.

Conclusion and Recommendations

Ethical practices can help steer our behaviors to maximizing welfare. Accounting ethics and sustainability reporting will help companies monitor their own behavior and prevent any wrongdoing. Showing the impact of sustainability practices as measurable and quantifiable values will help companies adopt the practices that maximize value and discard the wasteful ones. If each organization of the society is similarly conscious and efficient, the world as a whole will be more efficient. Money saved is money earned. Resources saved are resources generated. With correct and ethical practices, accounting will show how to maximize the benefit accruing from existing resources, thereby helping the world with sustainable development. The world will learn to operate within the available resources, thereby ensuring that we keep up the pace of development without compromising the long term wellbeing of our planet. This is what sustainable development is all about.

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It is indeed admirable that the accounting world has taken on the challenge of achieving sustainable development through the accounting practices. However, it shouldn't get complacent. It must find better and more efficient ways of reporting so that the impact – both positive as well as negative – can be viewed as one monetary figure. The method of quantifying will help the company as well as the society at large to know what has been the cost of the business activity and correct the course of action if necessary. There should be a discourse on finding out if the sustainability reporting should be made mandatory. If made mandatory, the sustainability reports can be audited just like the regular financial reports. This framework will help the companies to save resources and to ensure ethical practices that will help all the stakeholders a great deal.

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Cloud computing with ERP - A push business towards higher efficiency

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Abstract

In modern era the pace of shift in technologies trends and demands of companies is very fast. Earlier, most of the enterprises used ERP systems which were integrated software packages with a common database that supported business processes of companies. In addition, they were the backbone of large business enterprises. However, along with several advantages some challenges such as high installation cost, huge initial investments, high cost of maintenance, trained technical staff, regular system updating and data management and licensing are also associated with its usage. Furthermore, many companies today are thinking to move the whole ERP over to the cloud. Cloud-ERP is being preferred by most of the companies because of its capability to analyze massive data sets without making a significant capital investment in hardware, licensing and so on. It has been gaining increasing attention over the last few years and is being hosted in a platform over the internet. Most of the enterprises are concentrating towards using this technology because of its flexibility, easy to use, cost of setup and provision of much more features that could be accustomed to almost every type of business. The preset study covers the direct and indirect aspects of Cloud-ERP software systems. The primary data was collected from the employees of various IT companies, through a well-designed and a structured questionnaire. One way ANOVA was used to test the significance of the results. It was found that the adoption of cloud ERP had a significant affect on business and enhanced the efficiency of business and had a significant positive impact on the day to day operations of enterprises. The positive perceptions of employees indicated the clear transition of companies toward adopting cloud-ERP in their business operations.

Keywords: Cloud computing, Cloud-ERP , efficiency, ERP

JEL classification: L-86, M-15, M-49

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Cloud computing with ERP - A push business towards higher efficiency

Introduction

Earlier, most of the enterprises were highly emphasizing on use of ERP as it was the mirror image of major business processes of organizations, such as customer order fulfillment and manufacturing and establishing integration between different departments of organization effectively etc. It was an integrated computer based application used to manage internal and external resources including assets, financial resources, materials & human resources to improve efficiency of enterprise (Johansson, 2015). It was built on a centralized database and was normally utilizing a common computing platform. The main features of ERP were flexibility; centralized database, supporting third party software, routinization, standardization, and integration. Managing information for high quality delivery to decision makers at right time, automating process of data collection, smooth flow of information across departments, developing and maintaining an enterprise wide database, faster response time, etc. However, along with several advantages, ERP vendors suffered from the perception that their software was difficult and costly to implement. In order to overcome such issues, the vendors were being forced to move from client/server to browser based architecture. But today, Cloud computing could be considered as a model for enabling ubiquitous, convenient, on-demand network access to shared pools of configurable computing resources (e.g., networks, servers, storage, applications, and services) that could be rapidly provisioned and released with minimal management effort or service provider interaction. It could promote availability and is basically composed of five essential characteristics, three service models, and four deployment models (Haddara, 2015). Besides, self-provisioning, pay-per usage, on-demand availability, scalability and resource pooling are the major business advantages of cloud-computing in the emerging competitive arena for companies.

To overcome the problems arising from ERP; enterprises are moving towards using Cloud ERP in their business functions. Cloud ERP is designed to address the inflexibility of existing ERP softwares by allowing businesses to choose the deployment option that fits their specific needs. Cloud ERP is a flexible and cost-effective option for small and medium-sized businesses and offers extensive benefits for growth and expansion (Ruivo, 2015). It is an enterprise resource planning software that is hosted in a platform over the Internet. The present study tries to explore the key reasons of transition from ERP systems to the Cloud-ERP and the factors

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which encourage enterprises to switch over to Cloud-ERP. In this regard the survey is designed to measure the drastic changes due to the emergence of the new IT system and its impact on the business operations of enterprises. Besides the study also tries to cover the direct and indirect aspects of Cloud-ERP software system on business operations of enterprises.

Major benefits of Cloud-ERP

Major opportunities that arise from Cloud-ERP implementation are as follows:

- Rapid scalability and deployment capabilities (providing just-in-time computing power and infrastructure)
- Decreased maintenance/upgrades cost and schedules
- Improved resource utilization—elasticity, flexibility, efficiencies
- Improved economies of scale
- Improved collaboration capabilities (Salim S. A., 2015)
- Ability to engage in usage-based pricing, making computing a variable expense, rather than a fixed capital cost with high overhead
- Reduced information technology (IT) infrastructure needs—both up-front and support costs
- Capacity for on-demand infrastructure and computational power
- Green friendly –reduced environment footprint
- Increased speed to implementation

Review of Literature

(Indu Saini, 2012) discussed the scope of cloud computing for Small and medium Enterprises (SMEs) in India by comparing the on premise ERP systems implemented in some SMEs with the available cloud solutions. The study was primarily an effort towards discussing the problems before SMEs in harnessing the benefits of ERP systems and suggesting cloud as a solution to some of their problems. The cloud computing model made the use of complex business solutions like ERP easier as it now could be installed and maintained by experienced IT companies on their premises. It removed the need for SMEs to invest in IT assets or retain IT persons. It showed that cloud based ERP solutions were less costly and more adaptable than the on-premises ERP in context of SMEs. (Sapna Shukla, 2012) focused on the SAAS based ERP, its advantages and disadvantages and it gave all the benefits of integration, all time data access, and hassle free set up at a lesser cost. Small and medium sized manufacturing and

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production companies were optioning the cloud based ERP solutions. Her study also covered some case studies which indicated the benefits that the companies could reap and the amount of time required in terms of days and not years. The companies had a 24X7 access. They were able to achieve integration and the business became more efficient. (Raihana, 2012) gave an insight into the nature of cloud computing impact on ERP implementations and attempted to find how external cloud services (SaaS) could make ERP work at a lower cost and with simpler, faster and better experience, faster and better. She also identified the scope and benefits of cloud ERP and found that cloud ERP applications were getting a tremendous demand from companies battling the business challenges. She also found that Cloud ERP was a maturing deployment model that provided a greater opportunity to capitalize on ERP investments which encouraged standardization through visible economic drivers and provided the opportunity for greater focus on strategic activities. (Lin, 2013) focused on the business model and business strategy that vendors could achieve in the Cloud Computing market by starting from a classification of possible Cloud Computing business models to the processes of transformation towards these business models for IT vendors. By applying SWOT method, feasible business strategy for Cloud Computing industry was derived and studied among Business strategy for cloud-software with factors like service vendors, datacenter vendors, storage equipment vendors, mobile device vendors. In particular with a clear picture of business strategy for the emerging Cloud Computing technology, vendors could position themselves for a market sector of their competitive advantage. (Christiana. C. Okezie, 2012) presented cloud computing in a simplified context and developed an efficient framework for enterprise web application integration in organizational models using private cloud offering. They focused their research on an implementation framework of the cloud computing system and provided a solid foundation on the application-level development methodology. They showed that cloud computing was very flexible and supported the pay-as – you –go scheme. It offered moderate performance and were low cost, scalable and rapidly deployable. (Michael Hauck) presented challenges and opportunities of the Cloud Computing technology. They focused that cloud computing introduced new trade-off decisions in the context of quality-driven software service architectures like trade-offs between service quality attributes, such as availability, distributed data consistency, service runtime performance, privacy and studied the level of privacy that could be provided practically using combinations of architectural and cryptographic approaches.

(FTSE, 2010) discussed the cloud used by government, business and universities – both

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overseas and in Australia – and found that there were valuable opportunities in cloud computing: for the government, researchers and business. Cloud computing facilitated the efficient management and use of very large databases and greatly reduced the cost of computation when segmentation of the task and parallel processing was possible and found that there were valuable opportunities in cloud computing– for government, researchers and business. (Sean Marston a, 2011) listed down some of the key issues with respect to costs, substantial capital investments in information technology, strategy issues in cloud computing and regulatory issues etc. They found that Cloud computing demanded a thoughtful and a coordinated response from all governmental agencies. They showed the SWOT analysis on cloud computing and focused on its key advantages. (Salim, 2013) explored the transition factors relevant to the distinct phases of cloud ERP adoption which was built on two process research studies. (Guttmann et al. 1998; Klein and Sorra 1996) found that transition factors were classified as "necessary" or "sufficient"; where "necessary" transition factors needed to exist in order for the firm to move to the next stage, while "sufficient" meant assisting in the movement. Their study not only consolidated, but also extended the existing literature on the technology adoption process for complex organization-wide technologies. For practitioners, their study could assist ERP and cloud vendors in prioritizing and upgrading their business quality at any point in time during the adoption process, which would thus increase the likelihood of cloud-based ERP adoption among SMEs. (Clohessy) explored the ERP innovation potential of cloud computing for the Irish government as a viable mechanism for replacing the traditional implementation process of enterprise resource planning. They found that Cloud ERP was positioned as a revolutionary approach to deploy an ERP solution. The main benefits associated with deploying a cloud ERP in comparison to traditional ERP deployment included low implementation, continuing, licensing and support costs, faster implementation of IT projects and increased agility. While the recent transition of the Irish e-Government to cloud computing was laden with opportunities and risks it was imperative to identify the public sector mission critical applications that would derive substantial benefits from moving to a cloud based solution. (Sean Marston, 2010) identified the strengths, weaknesses, opportunities and threats for the cloud computing industry and the various issues that affected the different stakeholders of cloud computing and gave a set of recommendations for the practitioners who would provide and manage this technology. Finally they outlined some of the key issues facing governmental agencies who, due to the unique nature of the technology, would have to become intimately involved in the regulation of cloud computing.

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(ERP on Cloud: Implementation strategies and challenges, 2012) discussed about the ERP implementation strategies and challenges in a Cloud Environment. and found that ERP was an important business software used in all major enterprises and was a useful tool to coordinate the available resources, information and activities to complete business processes. Its importance in an enterprise had led to an increased demand for the ERP software. The authors found that ERP in a CLOUD environment helped Medium and small enterprises to use it as per their requirements which lead to more efficient business process. (Lenart) analyzed the challenges of Cloud-ERP and the issues concerning traditional ERP and Cloud-ERP . He found that Cloud Computing was one of the most important revolutionary changes in Information and Communication Technology whose roots could be traced to technology and business trends also. (S L Saini, 2011) reviewed the development of Low cost ERP Solution to Indian industries on Mobile using latest technologies such as Mobile computing, SAAS, Cloud Computing etc. They studied the available hardware for implementation & simulations were done on developed systems and different future problems were studied. The problem faced during working of Mobile ERP were also studied and mobile ERP advantages & limitations were discussed in detail. (Petra Schubert, 2011) argued that the phenomenon of cloud computing lead to a decisive change in the way business software was deployed in companies. Their reference framework contained three levels (IaaS, PaaS, and SaaS) and clarified the meaning of public, private and hybrid clouds. The three levels of cloud computing and their impact on ERP systems operation were discussed.

Research Gap

A survey of respondents from IT companies with different educational qualifications, Designations and awareness about Cloud -ERP was conducted. It was found that vast review of literature was conducted in Cloud computing and ERP systems. However, the importance of Cloud-ERP and majors causes behind transition from ERP systems to the Cloud-ERP have not been conducted by researchers in their previous studies. Hence, the following study tries to explain the factors which encourage enterprises to switch over Cloud-ERP and attain business opportunities in a proficient manner. The studies show that adoption of cloud ERP had significantly enhanced the efficiency and had a significant impact on business. The focus lies on how cloud computing can improve business performance and usability.

Objective of the study

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- To explore the major issues arising due to the implementation of ERP system at the workplace
- To investigate the key reasons responsible for transition from ERP systems to the Cloud-ERP
- To identify the major advantages of Cloud-ERP in term of getting business intelligence and enhanced security & reliability and cost savvy functions effectively.

Hypothesis framed for the study

H_{01}: There is no significant difference of perception of IT employees towards transition of current businesses from ERP systems to the Cloud-ERP

H_{02}: There is no significant influence of the experience of respondents on the use of Cloud-ERP in business intelligence and the provision in the execution of innovative functions.

H_{03}: There is no significant influence of the experience of respondents related to use of Cloud-ERP on the perception towards it being user friendly & easily accessible.

H_{04}: There is no significant influence of the total IT experience on the perception towards security& reliability and cost savvy features provided by Cloud-ERP.

Methodology used for the study

The study tried to use both primary and secondary data for the study. The secondary source were all the published data available on the relevant websites and the primary data was collected using a well tested and a structured questionnaire. In this regard, a total of 200 questionnaires were distributed to employees of various organizations in the IT industry to know their perception about usage of Cloud-ERP for business purposes. Purposive sampling technique was taken because researcher has specific purpose behind conducting this study. 100 male and 100 female respondents were selected. Of all the questionnaires, we received 160 filled questionnaires of which only 130 were found to be complete in all respects sand were hence used for the study. The data collected was tabulated and the Cronbach alpha test was conducted whose value was found to be 0.71 indicating the reliability of the responses. Descriptive statistics was used to understand the responses regarding the adoption of the Cloud-ERP and the variation in the responses received with respect to its affect on business. Respondents were requested to submit assessments based on a Five -point Likert scale and all items were measured by responses in agreement/ relevance with statements, ranging from 1- Strongly Disagree to 5 - Strongly Agree. F – test ANOVA was used to analyse the difference

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in the perception regarding the benefits of cloud ERP .

Data Analysis and interpretation

Table 1: Demographic profile of the respondents

Demographics		Frequency	Percent
Age (in Years)	< 20 years (Trainee)	6	.7
	21- 30 years	56.6	69.7
	31- 50 years	12.5	15.4
	> 50 years	11.5	14.2
	Total	13.0	100.0
Gender	Male	100	76.9
	Female	30	23.1
	Total	130	100.0
Education	Intermediate (Diploma)	1	.8
	Graduation	71	54.6
	Post Graduation	49	37.7
	PHD	9	6.9
	Total	130	100.0
Total IT Experience (in years)	Fresher	35	26.9
	1-3 years	48	36.9
	4-7 years	20	15.4
	above 7 years	27	20.8
	Total	130	100.0
Designation	Higher management	5	3.8
	Middle management level	8	6.2
	Team-leader	6	4.6
	IT executive	79	60.8

Interpretation: Most of the respondents who participated in the survey belonged to the age group of 21-30 years (56.6). The male respondents participated more actively than the females as 77% of the total completed responses were males. Most of the respondents were graduate (54.6) and were working in the IT industry for the past 1-3 years (48). Respondents were designated at different positions and were from all the higher (5), middle (8), the team leads(6) and IT executives(79) and share their perceptions about the impact of Cloud-ERP on the business operation of organizations.

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		Reduce front expenses like maintenance cost, licensing cost	Automatic upgrade	Modern user experie-nce	Ease and fast deploy-ment	Pay per usage	Scalability	Quick access from anywhere anytime
Experience related to cloud computing	None	33	31	30	36	54	48	41
	1-3 years	23	20	12	20	36	24	19
	4-7 years	4	6	5	9	14	13	7
	>7 years	6	6	2	4	6	5	3

Interpretation: The survey tried to understand the perception of the IT employees, their experience and about they think about the benefits that would accrue on adopting Cloud ERP. Respondents having lesser experience found that the new system would be beneficial for their enterprises in terms of reducing front expenses like maintenance cost, licensing cost (33), automatic upgrade (3), modern user experience (30) and pay per usage(54). Most of the respondents who had Cloud or ERP technology experience stated that scalability and quick access from anywhere were the other major advantages attained by using Cloud based ERP in their day to day business operations. On the basis of overall experience of IT employees, it could be said that this technology would be highly beneficial for businesses in the context of performing data integration and quality capabilities and improved customer experience.

H_{01}: There is no significant difference of perception of IT employees towards transition of current businesses from ERP systems to Cloud-ERP.

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Table 3: One Way Anova (1)

Factors important for choosing Cloud-ERP		SS	df	MS	F	Sig.
Reduce front expenses like maintenance cost, licensing cost.	Between	.822	3	.274	1.09	.356
	Within Groups	31.67	126	.251		
	Total	32.49	129			
Automatic upgrade	Between	5.036	3	1.679	7.71	.000
	Within Groups	27.43	126	.218		
	Total	32.47	129			
Modern user experience	Between	.995	3	.332	1.41	.24
	Within Groups	29.54	126	.234		
	Total	30.53	129			
Ease and fast deployment	Between	.686	3	.229	.91	.438
	Within Groups	31.69	126	.252		
	Total	32.38	129			
Pay per usage	Between	.766	3	.255	1.99	.119
	Within Groups	16.16	126	.128		
	Total	16.92	129			
Scalability	Between	.499	3	.166	.72	.539
	Within Groups	28.92	126	.230		
	Total	29.423	129			
Resource pooling	Between	.846	3	.282	1.32	.270
	Within Groups	26.846	126	.213		
	Total	27.692	129			
Quick access from anywhere anytime	Between	.395	3	.132	.52	.669
	Within Groups	31.913	126	.253		
	Total	32.308	129			
Others	Between	1.466	3	.489	3.18	.026
	Within Groups	19.334	126	.153		
	Total	20.800	129			

Interpretation: In almost all the cases the significant value was found to be more than .05 thereby rejecting the null hypothesis and indicating a significant difference in the perception of the employees towards transition of businesses from the existing ERP systems to the Cloud-ERP. It could be concluded that not all the respondents feel that the reduction in the expenses like maintenance cost, pay per usage, resource pooling, quick

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access from anywhere anytime and ease and fast deployment encouraged enterprises to switch from traditional ERP systems to a new Cloud base ERP system. Though most of the IT executives and higher management of IT companies strongly agreed with the advantages of this new emerging technology in business operations they differed in their perceptions. Some of the respondents were neutral regarding quick access from anywhere anytime and scalability features of Cloud-ERP. From the overall responses of respondents, it could be said that all the above factors are responsible for transition from ERP systems to the Cloud-ERP in term of getting business opportunities.

H_{02}: There is no significant influence of the experience of respondents on the use of Cloud-ERP in business intelligence and providing freedom to execute innovate functions.

Table 4: One Way Anova (2)

		SS	df	MS	F	Sig.
Support modern user experience and socially enable business through	Between	4.386	3	1.462	1.117	.345
	Within Groups	164.88	126	1.309		
	Total	169.27	129			
Provide business intelligence and ability to meet business needs	Between	5.01	3	1.671	1.701	.170
	Within Groups	123.8	126	.982		
	Total	128.8	129			
Cloud-ERP provides freedom to innovate offers and automatic	Between	13.91	3	4.643	3.340	.022
	Within Groups	175.18	126	1.390		
	Total	189.1	129			

Interpretation: From the above it could be concluded that the experience of the respondents had a significant influence on their perception that cloud ERP provided a freedom to innovate offers and automatic upgrades and updates. In all the other cases it was found that the experience of the respondents had no influence on the perception that usage of could ERP supported modern user experience and socially enabled businesses and provided the necessary intelligence amd ability to meet business needs. In addition, cloud computing technology made it easier for enterprises to deliver ERP software as a service (SaaS) for customers who want to acquire cloud ERP and not have to manage hardware, software, and upgrades while reducing up-front expenses.

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H03: There is no significant influence of the experience of respondents related to use of Cloud-ERP in user friendly & easy accessibility

Table 5: One way Anova (3)

		SS	df	MS	F	Sig.
Cloud-ERP provides more flexibility and increase deployment speed	Between Groups	8.58	3	2.860	2.10	.103
	Within Groups	171.489	126	1.361		
	Total	180.069	129			
Improved system performance and accessibility	Between	10.638	3	3.546	2.78	.044
	Within Groups	160.754	126	1.276		
	Total	171.392	129			
No software to install or upgrade and enable cross platform compatibility	Between Groups	4.383	3	1.461	1.62	.188
	Within Groups	113.648	126	.902		
	Total	118.031	129			
Data Access from cloud anytime anywhere without losing through cloud-ERP	Between Groups	10.527	3	3.509	2.60	.055
	Within Groups	169.696	126	1.347		
	Total	180.223	129			

Interpretation: The respondents did feel that use of Cloud-ERP is beneficial for businesses in the context of increasing user friendliness and enhanced accessibility. Positive perceptions of CIO, mangers and team-leaders of IT companies indicated that after deploying this new system, management of IT firms would be able to take benefits of more flexibility and increase deployment speed and easy upgrade and enable cross platform compatibility related features of Cloud base ERP system in a proper manner. Besides that, this new system will provide opportunity to all types of companies to data access from cloud anytime anywhere without losing any information. Researcher Own and Clohessy (2011) findings were matched and both indicated that Cloud-ERP would be beneficial for enterprises in terms of improving resource utilization, enhanced collaboration capabilities, reduced environment footprint and reduced information technology (IT) infrastructure needs.

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H_{04}: There is no significant influence of the total IT experience on the perception towards security& reliability and cost savvy features provided by Cloud-ERP

Table 6: One Way Anova (4)

		SS	df	MS	F	Sig.
A front expense reduces through cloud-ERP	Between Groups	8.527	3	2.84	1.953	.124
	Within Groups	183.35	126	1.45		
	Total	191.88	129			
Improved in security, privacy and scalability through cloud-ERP	Between Groups	1.089	3	.36	.268	.848
	Within Groups	170.48	126	1.35		
	Total	171.57	129			
Support modern user experience and socially enable business through cloud-ERP	Between Groups	4.386	3	1.46	1.117	.345
	Within Groups	164.88	126	1.31		
	Total	169.27	129			
Cloud-ERP provides freedom to innovate offers and automatic upgrade and update	Between Groups	13.929	3	4.64	3.340	.022
	Within Groups	175.18	126	1.39		
	Total	189.11	129			
Cloud-ERP service can deliver on expectation	Between Groups	15.80	3	5.27	3.502	.017
	Within Groups	189.50	126	1.50		
	Total	205.30	129			
Improved system performance and accessibility	Between Groups	10.638	3	3.55	2.779	.044
	Within Groups	160.75	126	1.27		
	Total	171.39	129			
Cloud-ERP provides freedom from IT constraints	Between Groups	17.29	3	5.76	4.831	.003
	Within Groups	150.32	126	1.19		
	Total	167.61	129			

Interpretation: The total IT experience of the respondents had as significant influence on the various aspects of security, reliability and the cost savvy features provided by cloud ERP. That cloud – ERP could innovate, could deliver on expectation, could provide improved system performance and accessibility and could provide freedom from IT constraints was not influenced by the IT experience of the respondents. But the experience did influence the perception that front end expenses reduced through adoption of cloud ERP, there was improvement in security, privacy and scalability through the adoption of cloud ERP, that adoption of cloud ERP supported modern user experience and socially enabled businesses. Improvement in security, privacy and scalability, reduced front expense and improved system performance and accessibility were the other major features of Cloud-ERP that helped firms in customizing security services, 24/7 support and getting benefits of reliability and cost savvy features of new IT system in a proficient manner. On the other side, indirect impact of cloud base services on businesses could be seen in the form of better corporate image, improved customer goodwill, customer satisfaction and so on.

Conclusion and Management Implications

It could be seen that the adoption of cloud ERP had significantly enhanced the efficiency and had a significant positive impact on business. Though there was difference in the opinion and perception on the benefits of the adoption of cloud ERP, there were clear signs that companies were interested in adopting cloud-ERP. The bottom line is that ERP software need to be deployed in a cloud environment to become a "Cloud ERP Software". Cloud based ERP benefitted the customers by providing application scalability and reduced hardware costs. Customers could build an internal cloud to reduce the ongoing hardware costs while maintaining greater control over integration. The study tried to cover the direct and indirect aspects of the Cloud-ERP software system, the direct aspects including improved efficiency, information integration for better decision making, faster response time to customer queries and the like etc. The indirect aspects included better corporate image, improved customer goodwill, customer satisfaction and so on. The outcome of the study could be beneficial for enterprises in terms of taking decisions toward adopting Cloud-ERP to get better business opportunities. Students and scholars could be benefited by increasing their knowledge level about Cloud base ERP, its current trends and futureopportunities.

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Walking the Tight Rope: Monitoring or Invading Employee Privacy

Dr. Azra Ishrat[1]

Abstract

WeCare is a medium sized private company dealing with home appliances specifically consumer electronics. Wecare was established, in 1976 as a small family run store. In 1980's, was one of the leading manufacturer and supplier however with passing time, the company profitability started declining. The top management was greatly concerned about this. After a long discussion, top management of the company decided that it was time to change leadership. They recruited Mr. Ranjan Shah as its Managing Director. Mr. Shah had 35 yrs of experience and had a reputation of sailing any sinking ship. After settling into his new position, Mr. Shah busied himself identifying the major issues facing the company. After lot of contemplation and analysis he identified the various problem that were mostly 'people' oriented. He tried to fix the problem by carrying out things he had learned from his previous jobs in US, which had given wonderful results in the past. In the first place, he requested the IT dept to monitor what employee did on their desktop/laptop during the working hour. After few days he got a surprising result that most of the employees were using 40 percent of their time in watching YouTube, listening to music, surfing net, talking on phone etc. He did not disclose his observation to the employees and felt that his decision to monitor employees was right. Next, he asked the IT Department to tap and record the phone calls of the employees. The Supervisors would plug into any of their staff's phone calls to keep track of how long employees spend with each customer. Not satisfied with even this one day he called his few trusted employees and after taking them in confidence asked them to tell him about their colleague about what they did during the office hour and about what they talked.

Ms. Protima Senior Manager Sales noticed that there was sharp decline in performance of employees. She thought of talking to her teammates to find out the reason behind their declining performance. They confided to her that it was awful to work under such boss who did not trust their integrity who looks at them suspiciously all the time. She told them that she had indirectly hinted that it was creating unhealthy work environment. However, he rebuffed and

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accused her of supporting her people who were wrong.

The last straw was when employees came to know that Mr. Shah had secretly got installed a hidden camera in office and viewed what was happening in the office. Ms. Promita, was quite offended when one day Mr. Shah called her and scarsticaly said that she was not contributing enough in the organization. When she refuted his claim, he started showing her clip where she was criticizing Mr. Shah and his work style. Ms. Protima was shocked at the way her boss was spying her. After spending the entire day in thinking about what had transpired between her and Mr. Shah she decided to write to the Chief People Officer. In these circumstances what Chief People Officer and employees can do?

Key words: Privacy Rights, Monitoring, Technology, leadership, Invasion of privacy, personality,

JEL Code: L20, M12, M54

Walking the Tight Rope: Monitoring or Invading Employee Privacy

We Care is a medium sized private company dealing with home appliances specifically consumer electronics. It has huge contribution in the field of consumer electronics. Mr. Hemant Trivedi, who was B.Tech in electronics and had done MBA from Harvard, established it in 1976 as a small family run store. Having worked in the UK and USA, he came back to India armed with a vision of pioneering manufacturing of superior quality electronic products. He dreamt of making WeCare a household name in home appliances. He was an experienced person who foresighted the needs of home appliances in India as more and more women were entering the workforce, which gave them less time for household chores.

In 1980's WeCare was one of the leading manufacturer and supplier of the home appliances especially in consumer electronics like water heater, toaster, kitchen stoves etc. With the passage of time, the company workforce expanded from 6 to 700 employees. With growing business, demands of the company Mr. Trivedi found it difficult to handle everything by him. He felt the need to turn his business into professionally run organization. So, he recruited Mr. Shashi Verma as Managing Director of the firm in 1985. Mr. Verma was Bachelors in Technology from the Delhi University, and later he did MBA at the Wharton School, University of Pennsylvania. Under his able leadership, the business grew in leaps and bounds. It emerged as the most successful companies in consumer electronic goods.

His work philosophy was of Human Relation School of management. His humanistic approach towards employee made him very popular among the employees. He believed in open communication and participative decision-making, giving autonomy to workers. His humanistic approach towards employee made him very popular among the employee. Although, loved and respected by the employees, his work approach developed complacency in the organization. The employees became casual towards their work.

With passing time, the company profitability started declining. There were several reasons for it. First, because of sleeker and upgraded product in the market, consumer preference had changed. Second, employees lost interest in selling products which was not up to the mark or which had almost no demand. Although the company had R& D department but it existence was just for the sake of it. The department used to conduct biannual survey to understand market apart from this they also collected data related to complain of the customers. However, these findings were not translated into concrete action for improving the product quality. When questioned they claimed helpless as the facilities in terms of time, material and machines to work on improving the product was not there. Moreover, fund allocated for them to upgrade the product was mere peanut. As a result, the profitability of the company has declined over the years largely to the extent that survival of the company was at stake. The top management was greatly concerned about this. After a long discussion, top management of the company decided that it was time to change leadership. They recruited Mr. Ranjan Shah as its Managing Director. He just like Mr. Trivedi was Graduate from Harvard and had worked with reputed firms of US. Mr. Shah had 35 yrs of experience and had a reputation of sailing any sinking ship.

After settling into his new position, Mr. Shah was engaged in identifying the major issues facing the company. He had realized that growth and profitability of WeCare was declining, but he was not sure if the source was the management team, product development, marketing and sales, or something else. During initial weeks of taking the control of WeCare, he saw work culture of indiscipline. Most of the employees did not adhere to the office timing; they would walk in office far behind the scheduled time. During office hours, the employees were not at their workstation. Walking around the office, he would meet employee who appeared demotivated and detached. It appeared as if no one was interested in organization or product. They either would be chatting on phone or engrossed in their desktop /laptop. Mr. Shah felt something amiss. After few weeks, he concluded that declining profitability of WeCare was not only due to change in consumer preference but mainly due to its employees and their attitude. His initial impression was that most of them were not serious about their work and was just passing time in the office. After lot of contemplation and analysis he identified the various problem that were mostly 'people' oriented. He tried to fix the problem by carrying out things he had learned from his previous jobs in US, which had given wonderful results in the past.

He strongly felt that there was need to monitor various activities at workplace. He introduced series of monitoring schemes. Shah directed the HR office to monitor the entry exit of employees. To his surprise one-week data from HR, indicated that almost 60% of employees were not giving full-time to the organization. They either were late to office or left their workplace earlier than the scheduled timing. He asked Head, HR to send a mail to all the employees directing that anyone who did not stay in the office until the scheduled timing

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would be penalized. Simultaneously he issued order to keep a register, wherein anyone who left the workstation for more than 15 min was required to fill where and why he was going. In case the employee left their workstation for more than 20 minutes apart from lunch hours, the senior most was suppose to make a call and ask about his whereabouts.

This came as a rude shock to employees who saw it as violation of their right to move in and around organization for official purpose. They initially refused to carry out the orders but after seeing their colleagues penalized, they succumb to it. Although employees started adhering to the timing and restricted their movement within the organization however, they started feeling suffocated and disgruntled. One employee said, “This control on our movement is infringement of our right. Staying in the office is like punishing oneself.”

Happy with the result Mr. Shah felt that he was taking required actions. Motivated by the results he felt the need of intense monitoring. Now employees were there in office all through the day but appeared disenchanted. Whenever Mr. Shah walked around the office, he would found employee either engrossed in their laptop or busy with phone. On surface, they appeared engrossed in work. There was something strange about their behavior, which worried Mr. Shah. He kept thinking of what could be the problem, which led to such odd behaviour. After lot of contemplation, he asked the IT Department to tap and record the phone calls of the employees. The Supervisors would plug into any of their staff's phone calls to keep track of how long employees spend with each customer. In addition, how many customers they handle in each quarter hour and whether they were making personal call from the office. His purpose of implementing this system was to protect the integrity of the company’s contracts and verbal commitments, and check the quality of conversation with the customer. In addition to this, he wanted to see whether they were making or attending personal or official calls. Naturally, this did not go over well with some of the employees who thought that this was an invasion of their privacy. Some of the employees started using their cell phones or other company phones to make their personal calls. Others would complain to their coworkers and supervisors about the company’s disrespect for their privacy. However, Mr. Shah saw nothing wrong in it. He believed that employees should not be bothered by the fact that the company is recording their phone calls because the phones are company property and employees are being paid to work. He said, “If employees believe that their assigned phone is their personal phone and they can use it as they please they are mistaken. The company was paying for the phones for business purposes”. He made it clear that if the employee did not

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want their conversations to be recorded, they should not have them at work. Employees could use their cell phones to negate the recording system, and everyone would know that they are on a personal call. They can also go to another desk to make their personal phone calls, but this would mean that they are not working

In similar vein, he once again asked the IT Department to monitor as what employees do on their desktop /laptop during the working hour, record Internet and other computer activity and to see what is stored in employees' computer terminals and hard disk. After few days he got a surprising result that most of the employees were using 40 percent of their time in watching YouTube, listening to music, surfing net, playing games etc. He did not disclose his observation to the employees. Irritated with the findings he felt that his decision to monitor employees was right and there was a need even more intense monitoring and control of employees. The next day the employees got memo, which warned the employees to use the company's computer only for company business. The employees felt that their privacy was invaded. One of the employees said that such type of monitoring was as if a stranger had looked in her desk or purse and told them what could and could not be there. One of them said, “"I worked for so many years why don't they trust me now? I will continue to be a good worker, but I won't do any more than what is needed now."

The employees were frustrated at his antics. They could not understand why so much monitoring and controlling was being done. They also felt that excessive monitoring was spoiling the work environment of the organization. At first, the employee did not understood why Mr. Shah was behaving so weirdly with them but after few months, they realized what was happening in the office.

Not satisfied with even this, one day Mr. Shah called his few trusted employees and after taking them in confidence asked them to tell him as their colleague about what they did during the office hour and what they talked. He asked them to get him information related to what people thought about the organization and it policies and more importantly about him. They were supposed to inform him about conversations in the workplace, even who got along with whom, what they did after the office etc. Here too, he got adverse report about him. He was told that employees do not think well about him. They felt like working under Hitler who was ever spying and his work practice made them feel like prisoners hooked up to a computer; mistreated, guilty, paranoid, enslaved, violated, angry, and driven at a relentless pace.

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Ms. Protima, Senior Manager, Sales, while looking at the sales record noticed that there was sharp decline in performance of employees. She thought of talking to her teammates to find out the reason behind their declining performance. She called up her team and first started talking about general things in the company and then moving to specific issue. After initial hesitation and coaxing her teammates started opening up. They confided to her that it was awful to work under such boss who did not trust their integrity who looks at them suspiciously all the time. One of them said "Can't we do something about our boss? His mere presence is affecting my mental well-being. It is frustrating to work where you don't know whom to trust and whom not." Another one seconded by saying, "you can't express your true feelings, fears, frustrations and anger because you don't know whom among us would go and inform the boss. You cannot speak freely without any fear. I don't feel like coming to work anymore". Hearing all this Ms. Protima realized that Mr. Shah excessive monitoring was creating problem for everyone. She also recalled that those under her had often complain to about not feeling well, experiencing unnecessary anxiety, not able to concentrate, unable to think creatively, and were frequently found guilty of culpable absenteeism**.** She also felt that apart from lower productivity it was having adverse impact on work culture. Instead of teamwork and camaraderie, there was distrust among colleagues, which led to strained relationship between them. In meetings, employees refrained from speaking their mind for the fear of being misquoted

Consoling them, she said that, she too was fed up with Mr. Shah's weird ideas of spying. She told them that she had indirectly hinted that such thing are uncalled for and was creating unhealthy work environment. She tried to make him understand that monitoring was leading to psychological and physical health problems. Employees rather than focusing on work were more involved in safeguarding themselves, which was in long run would adversely affect the organization. However, he rebuffed and accused her of supporting her people who were wrong.

The last straw was when employees came to know that Mr. Shah had secretly got installed a hidden camera in office and viewed what was happening in the office. Ms. Promita, Senior Manager, Sales was quite offended when one day Mr. Shah called her and scarsiticaly said that she was not contributing enough in the organization. He also reprimanded her that he knew what you and your friends were talking about him and how loyal they were toward their work and organization. When she refuted his claim, he showed her the recording of what she did during the office hour. He also showed her clip where she was criticizing Mr. Shah and his work style. Ms. Protima was shocked at the way her boss was spying her. She got angry about

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the hidden cameras. "It's not a problem to have cameras in the office, but if you hide the camera that means you don't want people to know what you are doing. It was very sneaky. I can't imagine anyone having good feelings about working for a boss who is spying on them." She told her colleagues who too shared the same opinion. One of them said, "When people feel like they're being spied on, it sets a negative tone at work." Another one complained, “They push you around, spy on you. There's no trust, no respect anymore."

After spending the entire day in thinking about what had transpired between her and Mr. Shah, she decided to write to the Chief People Officer of the Organization complaining of invasion of privacy under the pretext of monitoring and control.

Questions raised in the case

1. What is according to you is privacy at workplace and what constitutes invasion of privacy?
2. To what extent and under what circumstances does an employer have the right to conduct surveillance in respect of the activities of an employee?
3. When does the employer’s right to oversee the activities of their workers become an invasion of the employee’s right to privacy?
4. How can organization protect employee privacy rights along with monitoring?
5. What are adverse affect of monitoring in organization at micro and macro level?
6. Can Mr. Shah’s monitoring initiatives are justified. Give reasons for your choice

Managerial Implications

While employers use monitoring to keep track of their employees' actions and productivity, employees feel that too much monitoring is an invasion of their privacy. Use of the Internet or telephone for non-job related activities while on the job can be destructive for the organization. A crucial reason for Internet monitoring in the past five years has been the illegal use of Internet at work to access pornography (Whittle 2000). Often employees have been caught using an employer's Internet facilities to start and/or operate their own businesses while on the job. Studies have found that employees are abusing their computer privileges for personal emails, shopping, stock trading, and much more while on the clock at their workplace. This leads to low employee productivity which creates profit loss for the parent company in the long run. The estimated abuse of computer privileges is 75 minutes every day” (CM 2005). Apart from the financial loss employers are also concerned with sensitive and confidential

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information being sent outside of the company to its competitors, vendors, suppliers, and customers; thus employees harming the company.

However monitoring employees can have ill effects on employees. Since most of the employees spent almost more than 9-10 hours at workplace every behavior/communication/gestures / may not be intentional or meant to harm the organization however if their every move behaviour or comment is being monitored employees start feeling stifled. An overzealous manager's monitoring system could create a Big Brother scenario that could anger employees and create a hostile work environment. It can "…inject an air of suspicion and hostility into the workplace" (Schulman, 2002). The intensive and uncalled for monitoring generally create an environment of mistrust and hostile work environment. Employees believe that such monitoring violated their privacy rights as employers may even listen to personal conversation between workers. Another aspect is that since most of the employees spent almost more than 9-10 hours at workplace every behavior/communication/gestures / may not be intentional or meant to harm the organization but when it is unjustified monitoring When workers begin to feel that their employer does not trust them, their mental well-being is harmfully impacted (Pai,1997).

Intensive monitoring can be used without precipitating employee unrest as long as employees believe that such information will make a possible contribution to evaluation, used against them and reward system. In case the organization wants to go for monitoring, they need to inform the employees that they are being monitored. Organizations need to have a written code of ethics and providing ethics training, such as discussions of ethical scenarios, to help employees understand what is expected. If employee monitoring is being conducted and if a code of conduct exists, employers should notify employees at the outset (as well when it is being updated) and educate them on the code of conduct. Clear guidelines on the use of telephone calls, e-mail, and voice-mail should be in place.

Teaching Notes

1. Synopsis of the case

WeCare is a medium sized private company dealing with home appliances specifically consumer electronics. It was established in 1976 as a small family run store. In 1980's it was one of the leading manufacturer and supplier however with passing time, the company

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profitability started declining. The top management was greatly concerned about this. After a long discussion, top management of the company decided that it was time to change leadership. They recruited Mr. Ranjan Shah as its Managing Director. Mr. Shah had 35 yrs of experience and had a reputation of sailing any sinking ship.

After settling into his new position, Rajan busied himself identifying the major issues facing the company. After lot of contemplation and analysis he identified the various problem that were mostly ‘people’ oriented. He tried to fix the problem by carrying out things he had learned from his previous jobs in US, which had given wonderful results in the past.

In the first place, he requested the IT dept to monitor what employee did on their desktop /laptop during the working hour. After few days he got a surprising result that most of the employees were using 40 percent of their time in watching YouTube, listening to music, surfing net, talking on phone etc. He did not disclose his observation to the employees and felt that his decision to monitor employees was right. Next, he asked the IT Department to tap and record the phone calls of the employees. The Supervisors would plug into any of their staff's phone calls to keep track of how long employees spend with each customer.

Not satisfied with even this one day he called his few trusted employees and after taking them in confidence asked them to tell him about their colleague about what they did during the office hour and about what they talked.

Ms. Protima Senior Manager Sales noticed that there was sharp decline in performance of employees. She thought of talking to her teammates to find out the reason behind their declining performance. They confided to her that it was awful to work under such boss who did not trust their integrity who looks at them suspiciously all the time. She told them that she had indirectly hinted that it was creating unhealthy work environment. However, he rebuffed and accused her of supporting her people who were wrong.

The last straw was when employees came to know that Mr. Shah had secretly got installed a hidden camera in office and viewed what was happening in the office. Ms. Promita, was quite offended when one day Mr. Rajan called her and scarsticaly said that she was not contributing enough in the organization. When she refuted his claim, he started showing her clip where she was criticizing Mr. Shah and his work style. Ms. Protima was shocked at the way her boss was spying her. After spending the entire day in thinking about what had transpired between her and Mr. Rajan she decided to write to the Chief People Officer. In these circumstances what Chief People Officer and employees can do?

Learning Objectives:

1. To understand what constitutes Invasion of privacy
2. To understand when Monitoring could be taken as Invasion of Privacy
3. To understand the impact of Invasion of privacy at micro level and at macro level
4. How to balance between monitoring and invasion of privacy

Key Learning:

1. Employers retain the right to monitor their staff in some situations, but only if, done in good faith, and where there is a reasonable belief that an offence is being committed
2. Invasion of privacy is seen as infringement of individual rights
3. How the monitoring is implemented, whether the standards are viewed as reasonable, whether the information gathered is work-related and necessary, and, finally, the effects on employees ' quality of work life is what differentiate between monitoring and invasion of privacy
4. An employee who is no longer trusted by his employer and vice versa creates a culture where employee sees no incentive for being loyal, efficient and productive
5. Inequality in power in contractual relationship gives an edge to the employers to extract more information without the employee full-hearted interest.
6. Unless employers are more sensitive to the needs of the monitored workers, there will be backfire and have adverse impact like labor turnover and
7. "When workers begin to feel that their employer does not trust them, their mental well-being is harmfully impacted"
8. Whether an intrusion is offensive depends on the circumstances.

Intended course (s): OB, Ethics Management, Leadership, Change Management Questions/Issues raised in the case

1. What is according to you is privacy at workplace and what constitutes invasion of privacy?
2. To what extent and under what circumstances does an employer have the right to conduct surveillance in respect of the activities of an employee?
3. When does the employer’s right to oversee the activities of their workers become an invasion of the employee’s right to privacy?

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4. How can organization protect employee privacy rights along with monitoring?
5. What are adverse affect of monitoring in organization at micro and macro level?
6. Can Mr. Shah's monitoring initiatives are justified. Give reasons for your choice

Teaching Plan:

The case will be distributed individually and is for individual analysis. After receiving individual input on the issue, the case is open for group discussion. The duration of class would be 2 hrs. The Bifurcation of time would be as following:

30 minutes allocated for reading, understanding and analyzing the case.

45 minutes for individual view on the issue raised in the case. 25 min for group discussion

20 minutes for class instructor to give his/her view and summarization Suggested time Plan: Initial classroom discussions: 45 min

Views/opinion of Case Instructor:

1. The term "privacy" is sometimes used to designate a situation in which people are protected from intrusion or observation by natural or physical circumstances. Hence, privacy can be natural or normative where the privacy is protected by ethical, legal, or conventional norms. For example, disclosure about health issues to medical professional would be normative privacy. When an unauthorized entry is made into a normatively private situation, privacy has not only been lost, it has been breached or invaded.

Privacy can be about location, activities or relationship

There are two perspectives on privacy. First is control theory, which states that privacy is not simply absence of information about us in the minds of others, rather it is the *control we* have over information about ourselves(Fried, 1984). For example, result of medical test conducted on self, or knowing what all is stored in one's laptop. Therefore, to protect ourselves we need to make sure the right people and only the right people have *access* to relevant information at the right time. Thus, it brings to second prospective the restricted theory of privacy. The Restricted theory states that privacy is characterized by the level of access others have to our information Anita Allen (1988). It puts the focus on what we should be considering when developing policies for protecting privacy.

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Employee monitoring decreases the amount of control employees have over their own information through unrestricted access. Even when organizations do not monitor, but set up the system to facilitate monitoring at any time, a breach of privacy has occurred.

2. Organizations have right to conduct surveillance when they need to ensure that:

a) Employees do not use personal compute for surfing internet; sending personal emails as every minute spent doing non-business related work is a minute not spent on increasing revenue

b) Trade secret, confidential data or any corporate information doesn't get leak

c) Attendance and productivity is beyond satisfaction

d) Employees do not take advantage of business illegally or unethically by copying, using office equipment without permission or by visiting outrageous sites.

William Parent (1983) has laid out six criteria for determining whether an invasion of privacy is justifiable:

1. For what purpose is the undocumented personal knowledge sought?
2. Is this purpose a legitimate and important one?
3. Is the knowledge sought through invasion of privacy relevant to its justifying purpose?
4. Is invasion of privacy the only or the least offensive means of obtaining the knowledge?
5. What restrictions or procedural restraints have been placed on the privacy-invading techniques?
6. How will the personal knowledge be protected once it has been acquired?

3. From an ethical point of view, an employee surely does not give up all of his or her privacy when entering the workplace. Employers retain the right to monitor their staff in some situations, but only if this is done in good faith and where there is a reasonable belief that an offence is being committed. The Ontario Superior Court 2008 gave a land mark judgment in favour of Ms Colwell. Her boss had secretly installed a hidden camera in the ceiling of her private office at her workplace in London, Ont., when he suspected the maintenance staff she supervised of stealing. The court observed that presence of the camera in Ms. Colwell's office

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without her knowledge, consent or even a good reason amounted to a poisoned workplace, and on that basis she was awarded damages.

4. Privacy is difficult to protect as `privacy right of different individual or group at times conflict for example managers interest in knowing about candidate psycho-social background before selection is to avoid negligent hiring However it conflicts with candidate interest to keep these information confidential. Instead of human monitoring use of technology can be made monitoring is done basically because things can go wrong, However work situation can be structured so that violations, abuses and errors are less possible. Some of the ways by which privacy can be protected along with monitoring is as following:

Establish behavioural norms at work thus cut down the need for monitoring

Employers need to provide employees with advance notice of monitoring as well as appropriate mechanism for appeal

Provide workers with access to information on themselves

Provide compensation to employees whose rights have been violated or who are victims of erroneous info generated by a monitoring system

Require people to verify machine produced info before using it to evaluate employees

5. The increased use of monitoring in the workplace could well backfire.The pressure on monitored workers can be unending, and nerve-racking and can damage their physical and psychological well being (Miller, 1996).Often employers can misuse monitoring to take revenge or vendetta against the employee, they could also use it to take out personal grudge against the employee. It also creates adversial relationships at work. When workers begin to feel that their employer does not trust them, their mental well-being is harmfully impacted (Pai, 1997) Workers may feel violated and powerless in the face of monitoring. There would be lesser of interaction with supervisor and that too would be more of impersonal, less satisfying. It might disrupt understanding between labour and management. Thus it leads to low morale, productivity and destructive countermeasures.

6. No, because Mr. Shah went beyond the employer's right to monitor employee. What ever he did was not in good faith. He engaged in tactics which were unethical in nature and

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uncalled for. The entire purpose for which he had started monitoring got defeated because instead of improving performance it created a climate of distrust and discontent among the employees which detoreiated their performance. The employees were not provided with any advance notice of monitoring, in terms of type and time. Apart from this there was no mechanism for appeal in case the employee's privacy rights was being abused.

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Bitcoin: Banking the Unbanked At the Bottom of the Pyramid

Mr Joel John[1]

Abstract

In a world of laissez Faire capitalism and migration at unprecedented levels, it has become a birthright to have access to a system that enables the common man to store and transfer money with ease. Over 4 billion people, living in the bottom of the pyramid, with daily wages as low as1.56 $ and a combined purchasing power of over 5 trillion dollars are ignored by financial organizations that cater largely to urban customers with higher income. If we combine the core benefits of banking • saving, credit, loans and money transfers with what the internet has to offer today, we will be able to find scalable, cheap solutions that can penetrate low income societies with great levels of efficiency. Over the past 5 years, the financial world has seen a phenomenon called cryptocurrencies. They remain largely unregulated, are used by (almost) anonymous entities and have facilitated cross border transactions like never before. Unlike banks, they do not require physical facilitators or offices. Transactions made via such crypto•currencies are often stored on a public ledger, referred to as a "block chain" and can be easily verified by anyone at will. This stands to be drastically different from existing banking systems where ledgers are often maintained in a highly secretive fashion and transparency is kept to a bare minimum. The fact that just about anyone with a computer and an internet connection can set up his or her own (unlimited) account(s) in less than 10 minutes and use the same as a medium of storage and transfer of value makes cryptocurrencies like Bitcoin, appear to be a highly appealing solution for banking for those at the bottom of the pyramid. This paper aims to compare existing financial organizations, their services and their competency against cryptocurrencies like Bitcoins in providing services for those at the bottom of the pyramid. The purpose of this paper is to provide insights into how technology can be better leveraged to enhance the lives of the poor around the globe and thereby accelerate the establishment of a better planet

Key words: Bitcoins, financial organization, cryptocurrencies

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Bitcoin: Banking the Unbanked At the Bottom of The Pyramid

Introduction

Man's wanderlust and his desire to attain and control more, often takes him far and wide from his near ones. His desire to save for times of hardship leaves him wishing for a service that would keep his income safe from external dangers such as theft. This inherent desire of keeping one's "earnings" safe and finding a better system of transferring value is what helped finance evolve from primal barter to the modern day system of banking. However, leaving ones hard earned money with external organization often requires trust. Trust in the fact that the money would be stored safely, optimally invested, made ready for withdrawals when needed and hope that the value of the stored money would not dip owing to inflation. In the modern era of e-commerce and digital payments, this trust would also mean banks playing the role of an intermediary.

Any organization involved with handling payments between multiple parties would have to ensure transaction costs remain minimal, verified for legitimacy and guaranteed to remain irreversible. A person involved in the act of trade is expected to know who he is dealing with to ensure he isn't being subject to fraud. The world has tried to solve these issues for hundreds of years, but what the economy has taught us in the recent past in the form of countless recessions and bailouts, is the fact that banking has been highly ineffective in serving towards the best interest of the common man. Conflict of interest has often arrived between serving customers and massive profits at corporate houses with great levels of influence on the way money is stored, transferred and invested. This leads us to looking at better solutions that are available around us. In the age of computerization one could find our solution in an electronic payment system based on cryptographic proof instead of mere trust, allowing any two parties sitting in any corner of the globe to transact and trade without the need for external parties.

In an ideal banking system, anyone should be able to access a banking system and have complete control on his saving without external parties having access to it. His money should not dip in value owing to inflation and he should have an incentive to save his money. A man should be able to store the fruits of his labor with ease and transfer it to those near to him at will with minimal transaction costs. No central entity should be able to print money at will and thereby inflate the supply of existing currency and bring a dip in its value. An ideal bank would

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not look into fractional banking or bailouts as a means of survival or profiteering. The state and the economy would remain largely separated leaving both parties with enough space to function independently and autonomously. In order to bring forth such a system, we'll need to combine computational resources that are already available to mankind with basic economic principles and enforce them via instructions or lines of code given to the machines.

Somewhere in 2008, an anonymous person that went by the pseudonym Satoshi Nakamoto displayed his brainchild to the world. "Bitcoin" as he'd call it was a revolutionarily new way of transferring value between any 2 places with access to internet without the involvement of any third parties. It enabled people to have complete control on their income, engage in irreversible transactions and transfer high amounts of value with minimal transactional value. Anyone with the ability to make a few computer clicks could now open a wallet online and transfer money without dependence on external players. While mainstream markets never bothered about adapting it, the anonymous and quick to transfer nature of bitcoins made them largely appealing to drug dealers and other miscreants on the interweb. The existence of a publicly available ledger known as the "block chain", made it easy for anyone to verify transactions. This ledger was shared by thousands of computers linked to the network and the "double spending problem" that had haunted banking for hundreds of years was now wiped away. Satoshi's code disrupted banking as we know with a few lines of code and a peer to peer distributed time•stamp server that generated computational proof of the chronological order of transactions. With the passing of time, Satoshi's invention went beyond the world of the dark deep webs and was covered by major news outlets. The taking down of Silk Road in November 2013, brought massive attention to the coin and before anyone expected it, the value of the coin soared from a mere 70 dollars to over 1200 dollars.

The fact that bitcoins can (and has) enable anyone in the world to open an account and store his income within a matter of few seconds makes it largely appealing for emerging economies such as India, Bangladesh, Philippines and so forth. Most of these economies are yet to find a proper system of storage of value or credit. The people in these countries live with the bare minimum and are often at the edge of poverty and starvation. Their incomes do not leave much to be saved, but it is important that our policy makers find ways to empower these people with access to the benefits of banking. Entrepreneurs and job makers are produced when banking reaches the bottom of the pyramid. This enables more and more people to be self-sustained and thereby further strengthens the economy. Bitcoin, is theoretically the finest form of banking the common man can access. In an era where more people have access to phones than to toilets (in India), Bitcoin stands high as a medium of storage and transfer of value. The fact that no external party is to be engaged in these transfers, transactions are irreversible and ideally the value of Bitcoin does not dip, makes it greatly appealing for markets that are massive in size and requires technology to help attain a level of scale that works towards the best interest of all parties involved

Bitcoin: A brief overview

Bitcoins are a form of digital currency that are created and stored electronically. Unlike normal currencies, no single entity control the production/printing of this form of cash. In order to attain bitcoins, people are made to "mine" by using computational resources in order to solve mathematical problems. Thousands of computers that are synced across the network of computers maintain a ledger known as the block chain. The block chain is a central repository of every transaction that has ever occurred via bitcoins. It is a time-stamped ledger mentioning the accounts involved in a transaction. This ledger is public and is often used by people across the globe to confirm and verify transactions. The block chain also makes it greatly easy for businesses or individuals to account for financial transactions that have occurred through their wallet. The block chain cannot be edited or made at will; it is maintained by every single computer within the network and due to the same cannot be edited at will.

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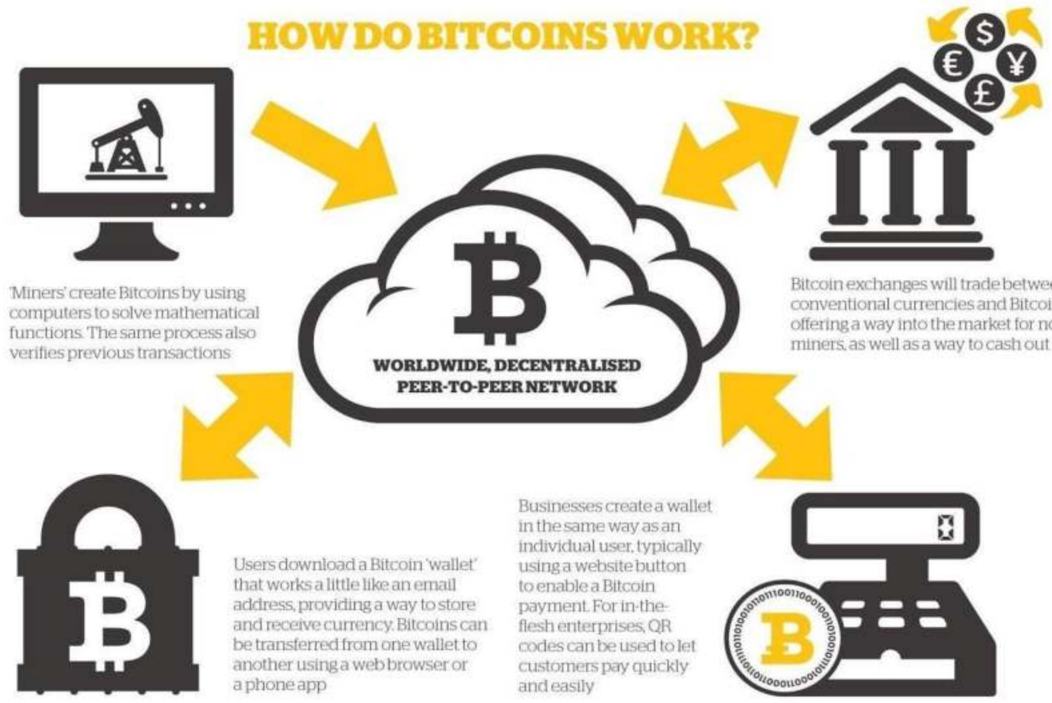

Source: http://www.aatcomment.org.uk/wp•content/uploads/2013/10/bitcoin•1•300x185.jpg

Bitcoin first emerged in early 2009 in the form of an open source code that was available for anyone to go through and verify. Satoshi Nakamoto strived to form a peer to peer transaction system that did not depend on a central entity to process transactions. Bitcoins share similarity with the US dollar in the fact that it is a fiat currency in that it is not redeemable for some amount of another commodity, such as an ounce of gold. Unlike the dollar, a bitcoin is not a legal tender, nor is it backed by any government or legal entity. The system is open with anyone granted access and no single entity controlling any part of the system.

In the present day scenario, people access bitcoins via exchanges that facilitate the trade of Bitcoins. Speculators sell and purchase bitcoins on basis of market demand and supply and profit upon short sells, while "hoarders" store bitcoins for the long run with hopes of cashing out once the value of the coin increases. Under an ideal financial system, anyone should be able to purchase or transact bitcoins at the click of a button. One of the best examples of an emerging economy relying upon Bitcoin for remittances and storage of value would be Kenya's Bit-pesa. The fact that the nation has a good mobile coverage and its economy is almost in ruins, leaving people searching for better alternatives, enabled an easy adaptation of what Bitcoins could offer the masses there.

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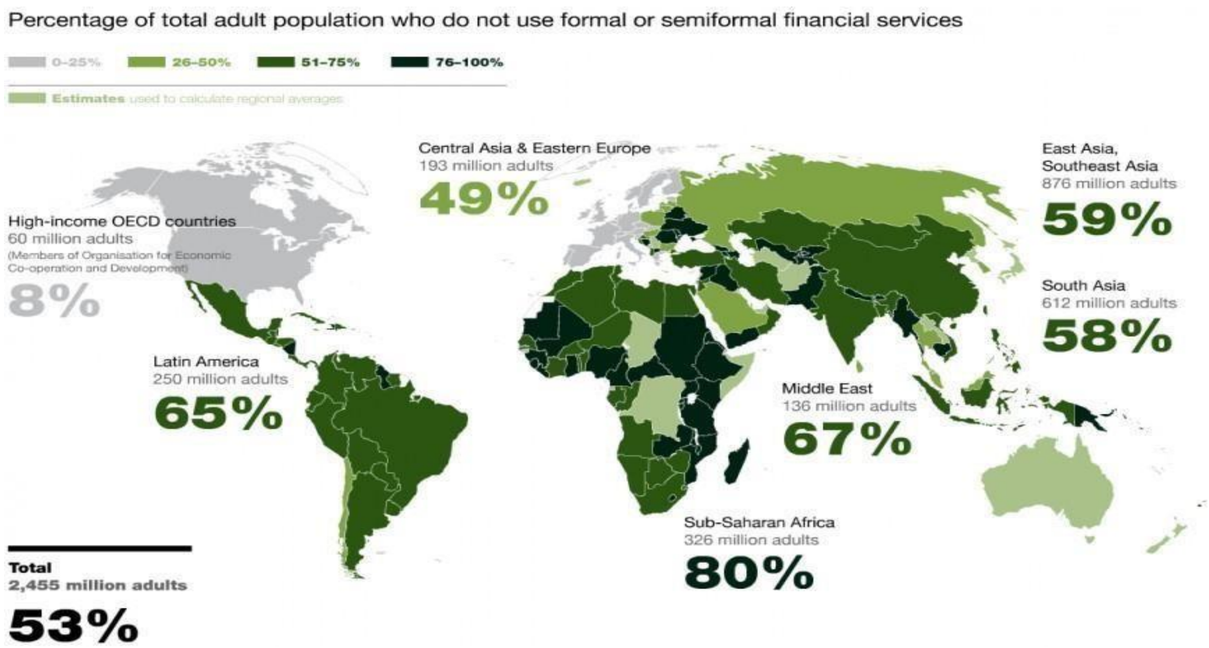
Bitcoin in the context of banking

Banks are expected to have 3 basic functions.

1. To act as a safe place for storage of anything of value
2. To provide loans and fund short term requirements of money of the general public
3. To be a means of easy and quick transfer of funds.

While conventional banks venture further into a wide array of other services, for the sake of simplicity and empowering the poor with the bare minimum of financial services, we will be focusing on these three aspects and analyzing what Bitcoin can offer the masses as a banking solution



Source :http://bravenewcoin.com/assets/Uploads/_resampled/ResizedImage870561•UnBanked•World•Map.PNG

Leveraging Technology to enable storage of value at the bottom of the pyramid

Given the peer to peer nature of Bitcoin, it is safe to presume Bitcoin will do to banking, what torrents did to the way media and content was earlier shared. Sectors that haven't been disrupted or seen any ounce of innovation will soon have to revamp their strategy for survival. The reason why Bitcoin stands to be such a huge threat to conventional banking system is the fact that its level of entry is quite low. Unlike traditional banking systems, in order to open a bitcoin wallet, people are not required to have a permanent address or any document for that matter. All that is required is a cheap phone with access to the internet. This comes highly attractive in growing economies like India, where the total internet user base is more than the total population of America. It astounds me to realize India has over 800 million telephone connections, but less than 600 million people use proper sanitary facilities such as well-built toilets. What one needs to realize is that technology has penetrated at levels that were unprecedented and we have now attained the scale required to leverage digital tools to beat our infrastructural disabilities.

A very good example of the internet being used for access to data across the country is Innoz Technologies. Launched by an engineering dropout in Kerala, the company has successfully churned a revolution that enables “dumb” phones to be smart via access to search engine results delivered by SMS. Google and a number of other manufacturers in the country have begun shipping smart phones with 3g access to internet for costs as low as 75 dollars. Given the current rapid adapter rate of smart phones across the nation, it would be safe to presume the people using these phones will be able to use their mobile devices as a means of storing money online.

Indian Telecommunication Penetration Figures

- Total mobile Subscriptions • 886 million
- Total Internet users 243 million
- Active social media users • 106 million
- Total number of mobile internet users • 185 million
- Average time spent on the internet via phone 2 hours

If businesses come forward being gateways to storage of money on the block chain and develop apps that enable those at the bottom of the pyramid to have proper access to their finances via their mobile devices, the current banking situation at the bottom of the pyramid would see drastic changes. Such solutions will be massively scalable as they require very little human interaction and can be fixed for error via means of code. The block chain is the world's single finest storage of value as anything entered onto it is auditable and verifiable by anyone, anywhere in the globe. The money stored in the form of these coins are relatively safe from theft and fraud, provided the mobile devices are well protected from malware. In addition to this money stored on the block chain can’t be stolen at any point of time by an external party as it is on the internet and does not exist in real life. Even if the mobile devices are stolen, the

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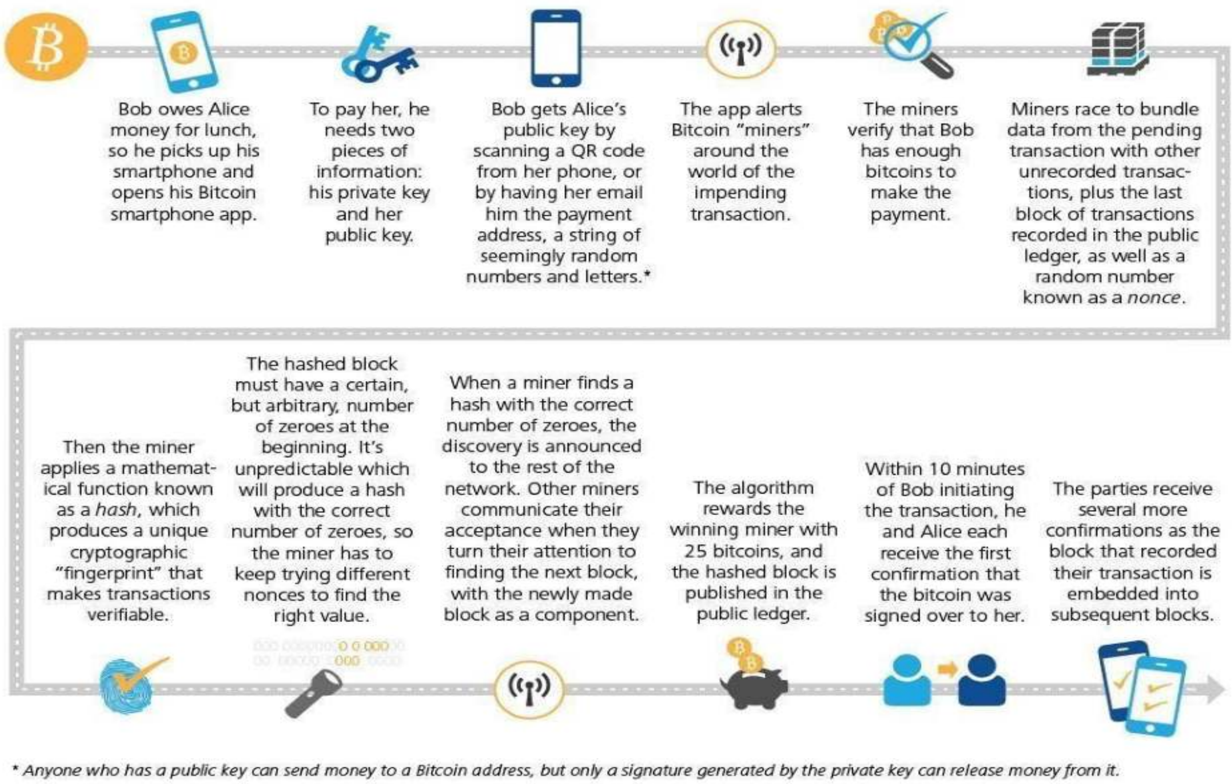
consumer will be able to retain his coins, given the fact that the block chain is synced across thousands of devices across the globe. Until and unless the consumer enters his "private key" or password in layman's terms, his coins remain safely in a "Wallet" largely similar to a real life banks vault.

Figure 1. How Bitcoin works



Source: American Banker, http://cdn.americanbanker.com/media/ui/how-bit-works-big.jpg.

Graphic: Deloitte University Press | DUPress.com

Bitcoins and Microfinance: Untapped opportunities

Micro•finance can be traced to as far as the 18th Century. The economist Lysander Spooner wrote about the impact of small loans given to the economy and how they enable the production of entrepreneurs in growing economies. On basis of numbers released by Forbes, one can verify that there are over 600 micro•financing organizations spread over 60 countries catering to over 800 million people. A peek into the top 50 micro•finance organizations would show that the major chunk of organizations dealing with microfinance come from 3rd world nations and emerging *economies*. Enabling people at the bottom of the pyramid to be in charge of their lives and take responsibility can have a major role in raising welfare, literacy rates and living standards. It can just about pave the way to a better future for all of mankind.

When one looks at micro•finance from the eyes of a bitcoin enthusiast it doesn't take him long to realize how the two can be leveraged for the establishment of a stronger economy. The fact that anyone anywhere in the globe can now transact money across continents without having to pay exorbitant rates to banks involved in the process and maintain a public ledger that can be seen and verified by the globe makes bitcoin that much more appealing to someone looking to combine Bitcoin with micro•finance. For example, if a person in America were to fund a farmer in Mizoram, India using normal methods he would have to undergo terrible exchange rates, massive remittance fees and comply with the long list of legalities and procedures involved. Ideally, if he did the same using Bitcoin he'd be able to transfer money in over 10 minutes and have a publicly registered transaction that can be used as proof. The fact that the "financier" can now save money on pointless fees charged by the banks, will make even more amounts of money available to those seeking finance in third world nations.

A very good explanation of what micro•financing can do for a community was given by Seth Godin

"If money circulates freely within the tribe, the tribe will grow prosperous more quickly. I give you some money to buy seeds, your farm flourishes, and now we both have money to give to someone else to invest. The faster the money circulates, the better the tribe does. The alternative is a tribe of hoarders, with most people struggling to find enough resources to improve productivity. When I make an interest free loan to you, I'm trusting you and giving you a gift at the same time. This interaction increases the quality of our bond and strengthens the community. Just as you wouldn't charge your husband interest on a loan, you don't charge a tribe member."

If micro-financing is to reach the 4 billion people at the bottom of the pyramid we'd need a system that makes it easy to record transactions of money loaned and a systematic approach to maintaining reputation of those that finance and those that seek money. It has to work towards the best interest of both parties involved and should be one that is easily scalable. In the age of digitalization, approaching this issue with back office solutions that require individuals to handle such transactions won't be viable. Due to the same it remains largely important that we integrate a system like that of Bitcoin into maintaining records, transaction of money and verifying repayment of previous loans. The reason why Bitcoin can be highly effective in comparison to any other solution is that it permits cross border funding with great amount of

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ease. It bridges those with excess funds in developed economies with those that need funds in developing economies without the need of an external intermediary and brings down expenses by a very large margin

Remittance: Transmitting dollars wrapped in care on the blockchain

The crux of the issues associated with remittance, is the fact that the charges associated work towards the best interest of relatively richer customers with deeper pockets. Banks have pricing policies that do not work in the favor of the average low end laborer. For example: Banks charge up to 15 dollars for each 500 $ sent. In most cases a laborer does not have 500 dollars to send together. His payment is sent in chunks of 100 or 200 $. He ends up losing up to 20 percent of his money in exchange rates, bank fees and other charges involve. What's even more shocking is the fact that in most of the growing economies the migrants send cash to, the fees the middle men charge can pay for a year's worth of school fee. The fee eaten up by these remittance houses to satisfy their greed can often be used elsewhere to empower the poor and create a better future, by helping them attain much needed education or make drastic improvements to existing infrastructure.

Bitcoins can bring in a drastic difference to the situation due to its low transactional fee and easy to access nature. The fact that anyone can send money to anyone located at any corner of the globe within a matter of minutes make it a lot more attractive in comparison with existing systems that are cumbersome and barely cost effective. Bitcoin transactions cost as low as .003 dollars in comparison with the existing market rates of 8•15 dollar for a medium level transaction. What this would mean for the average person is that a major chunk of his or her money would reach him safely in a matter of minutes from anywhere in the world without having external parties eat into it. In addition, the fact that these transactions can be made via mobile devices make it a lot more convenient than existing systems that require people to go to local kiosks and fill up forms to remit money. Bitcoin is the single fastest and most secure way to transfer cash to anyone in the globe. Existing businesses in 3rd world nations like Kenya's Bitpesa and Phillipine's Coin.Ph testify to the same.

Bitpesa • Cost Comparison

BitPesa is a remittance service based in Kenya that allows users to exchange Bitcoin for Kenyan Shillings that are sent directly to a recipient's mobile money account. Mobile money is

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a growing phenomenon in multiple growing economies around the globe. People lean towards using technological advancements available to them to make up for the lack of infrastructure. People tend to deposit money into an account associated with their phone numbers and then use it for transfer of money or purchase of commodity. Bitpesa is an important innovation in the field of remittance as it permits money from any corner of the globe to enter Kenya in a matter of minutes. What was impossible and largely time consuming is now possible within a matter of minutes. Since the transfer occurs largely online and the block chain foresees the remittance of money, there is little human labor or infrastructural requisites for such modes of remittance to take over.

Fig : Remittance charges while transferring money via western Union

Amount sent (£)	Western Union transfer fee (£)	Total used (£)	Amount received (KSH)	Effective exchange rate (KSH/£)*
2	2	4	295.24	73.81
5	2	7	738.27	105.47
10	2	12	1476.2	123.02
50	4.9	54.9	7380.98	134.44
100	4.9	104.9	14761.96	140.72
500	19.9	519.9	73809.82	141.97

Source : http://letstalkbitcoin.com/blog/post/in•depth•review•bitpesa

Fig : Remittance charges while transferring money via Bitpesa

Amount sent (£)	1% Bitcoin purchase fee + £0.09 purchase fee + £0.04 miner fee* (£)	Total used (£)	Amount received (KSH)	Effective exchange rate (KSH/£)
2	0.15	2.15	289	134.42
5	0.18	5.18	723	139.58
10	0.23	10.23	1447	141.45
50	0.63	50.63	7235	142.90
100	1.13	101.13	14470	143.08
500	5.13	505.13	72349	143.23

Source : http://letstalkbitcoin.com/blog/post/in•depth•review•bitpesa

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As the data given above shows, Bitcoin is a solution that can work for those at the bottom of the pyramid. While existing solutions like Western union provides its users incentives to send larger amounts by charging lower fees as the amounts go higher, most of the people at the bottom of the pyramid rarely have such high amounts to send back home. In addition, money saved in terms of remittance transfers often reach home and thereby supplements the income of those in 3rd world nations. More inward remittances could make the difference between a child attending a school or not, between nutrition and malnutrition or even between having access to proper sanitary facilities and not having them at all.

Services like Coin.Ph and Bitpesa do a lot more than merely permitting people in 3rd world nations to have access to external funds. They permit users from these growing economies to access the features of banking that was earlier denied to them. They provide incentives to people to work harder and save and thereby establish a stronger economy. At an age and time where banking services are limited to those in the middle and upper classes and banks across the globe are struggling to find cheap, sustainable, scalable solutions that can work at the bottom of the pyramid, Bitcoin stands to be a potential solution.

Associated Issues

1. Lack of early adopters due to technicalities involved

For any new technology to thrive and be adapted globally it has to be presented in the simplest form to its end users. While Bitcoin stands to be largely appealing as a cost effective solution for those that are unbanked, technical terms and jargon such as “cryptography” and “blockchain” can keep people away from using what Bitcoin could potentially offer them. Man tends to be fearful of what he knows the least and due to the same chances are high anyone would trust an emerging technology with their hard earned money. If Bitcoin is to be taken as a serious contendor, those working with the technology have to ensure it is presented in the simplest form to the end users and they are not left confused with a lot of confusing procedures or requirements.

2. Government policies and lack of regulation

Countries across the world are still coming to grips with Bitcoin. A few have come off as pro-bitcoin, while a large chunk have stayed back as neutral. Governments issuing “warning

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notices" against cryptocurrency can often be detrimental to the growth and establishment of Bitcoin as a currency or mode of banking. Governments tend to hold anti•bitcoin stances as they feel they stand to lose power with people adopting a means of banking that gives them the rights to minimal intrusion and influence into the way money is handled. Unless experts on Government panels across the globe go the extra mile to convince policy makers about the need, impact and urgency for adaptings Bitcoin, the technology could remain largely stagnant and unused.

3. Lack of early stage players in the industry

The fact that Bitcoin stands to be in a regulatory loophole with no clear regulations can often keep entrepreneurs away from coming forward with innovative solutions that can benefit the masses. While pro•Bitcoin countries like USA have had millions of dollars flowing into various ventures focused on Bitcoin, countries with no clear regulatory stance like India has seen only one start•up in the recent past. If the benefits of Bitcoin has to reach the average man, then businesses need to come forward and bridge the gap between the technology and the end user. Apps and websites that facilitate the purchase, hoarding and transfer of Bitcoin should come forth and establish themselves to further enhance consumer confidence and early adapter rates.

4. Fluctuating rates

The fact that Bitcoin is a highly volatile currency in its current form stands to be a huge threat to anyone looking to have their finances held in Bitcoin. People in emerging economies won't be open to storing their savings in Bitcoin if the value of the currency dips at random. Between November 2013 to November 2014 • the value of Bitcoin has gone from over a 1000 dollars to near 300. If a person see's his or her income dropping down to 70 or 80 percent of its initial value when stored in a particular mode of storage, he or she would be largely wary of adopting it. This will be a relatively small issue as more people begin adapting Bitcoin. however until then bitcoins won't be a smart choice for the storage of one's income.

Conclusion

As a technology bitcoin is still in its very nascent stage. The fact that a few lines of code written by a relatively unknown person could shake up banking as an industry stands to be

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astounding. The form of fiat currency we see today took over 600 years to evolve in comparison with cryptocurrency's 5 year life-span. To make a judgement on the technology would be a lot similar to analyzing Nikola Tesla's creations in the 20th century and wondering where this could take us. Asset management, contracts, decentralized storage • the creations being built upon the peer to peer nature of Bitcoin goes far and wide.

This is a technology that gives power to the people. It empowers them with benefits that were otherwise kept away from them. Anyone in the globe can now access the basic functions of a bank with a device that costs as little as 50 dollars. Hard earned wages of employees toiling abroad can now be sent home without intermediaries eating into it. Sweat, toil and labor of blue collar workers will now benefit their homeland more than ever before. This will have a substantial role in enabling growing economies to develop faster and helping them establish much needed infrastructure.

Bitcoin has seen tremendous growth in the 5 years of its existence. Statistics reveal, investments made into bitcoin start•ups have crossed the amount of money invested into Internet start•ups in 1995. With the passing of time, the industry would be relatively mature and bigger players would enter the market enabling the benefits of Bitcoin to reach the average man. Bitcoin will do to money, what the e•mail did to snail mail. While what the future holds remains to be largely speculated, what we've seen in the recent past from the technology is an emerging revolution that isn't afraid to question the status quo.

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